THE
PEDAGOGICAL SEMINARY.

Founded and Edited by G. STANLEY HALL.

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EDITORIAL.

This number closes the sixth volume of the *Pedagogical Seminary*. Its friends will be glad to know that from the first it has steadily grown in its hold upon the public, especially so since it became chiefly devoted to Child Study, of which movement it has always been the chief organ. It is now on a solid financial basis, and the quality of its subscribers is a source of peculiar satisfaction and pride. Its list is as select as could be desired, and includes the names of nearly all of the leading and progressive minds, most of all the younger ones, in all departments of educational work from the Kindergarten to the University, both in this country and in Europe.

With the next number the following list of co-operating editors will begin their duties.

T. M. BALLIET, Superintendent of Schools in Springfield, who will report from Europe, where he is spending the current year.

EARL BARNES, who will co-operate from Great Britain.

W. H. BURNHAM, who as head of the educational department of Clark University, has already frequently enriched the pages of the *Seminary*.

W. S. MONROE, of the Westfield Normal School, whose wide European acquaintance and new methods of work and bibliographical knowledge, will be available.

E. H. RUSSELL, Principal of the Worcester Normal School, pioneer in practical Child Study work, and one of the most suggestive and interesting minds the Editor has ever met.

Printed in Germany.

LOUIS N. WILSON, Librarian of Clark University, whose Bibliography of Child Study is the chief and only authority, and who is an expert in library methods, will publish the *Seminary* and continue his reports on library matters and otherwise enrich its pages.

The Editor expects to resume active contributions to its pages, and hopes to cause regular issue of its numbers, and with the aid of his associates effect improvements in the review department, and in other ways to make it indispensable to every one interested in real educational advance. Several other new departures are contemplated.

The first article in this number, by Messrs. Kline and France, introduces almost a new subject, and not only gives a good summary of the literature bearing upon the larger view of it here advanced, but attempts a new contribution.

Dr. Chamberlain shows how modern anthropology regards the child as more generic than the adult somewhat as woman is more generic than man.

The Editor records a summer exploration of his own boyhood memories up to the age of fourteen.

Superintendent Johnson describes his unique play school, which has suggested so many trialette schemes of the same sort elsewhere.

Miss Vostrovsky makes a unique but significant contribution to the great subject of children's favorite reading.

Professor Hodge states his general standpoint concerning Nature Study, his courses in which at the Clark Summer Schools have been so attractive and valuable. His view is new and marks a distinct advance, and its practicality has been demonstrated in the Worcester schools.

The literature, notes, and annual index, follow.

THE PSYCHOLOGY OF OWNERSHIP.

By LINUS W. KLINE and C. J. FRANCE.

The present study is an attempt to investigate the origin and nature of the instincts and motives that operate in the accumulation of property, and to describe more thoroughly, than heretofore attempted, those psychoses arising from the consciousness of things owned; also to indicate the role played by property as a mind-developing agent. For these purposes the sciences of biology, anthropology, social economics, child study and history furnish analogies and illustrations.

SECTION I. BIOLOGICAL.

Property, defined biologically, is anything that the individual may acquire which sustains and prolongs life, favors survival, and gives an advantage over opposing forces.

What are the conditions and circumstances attending the acquisition of property among the forms of animal life? In unicellular life these conditions appear to be hunger, thirst, and cold. Hunger may cause a sessile form to acquire means of locomotion, desert its sessile apparatus and go in search of food. We have observed this phenomenon in the vorticella. The whole process may take place within twenty minutes. Desiccation and a fall in temperature impel some forms to put on a coat, *i. e.*, surround themselves with a thick covering to tide over such crises. Property getting, then, in this type of life, consists in food getting, exchanging a thin for a thick covering, and a sessile for a locomotor apparatus.

The conditions underlying the acquisition of property in multicellular life are extremely complicated by the presence of two biological principles:[1] Multiplication (and the consequent distribution of species) and Death.

Along with differentiation in function, form, size, and the multiplication of individuals both in kind and species has gone distribution partly as a causal and partly as a reacting agent, until the waters, the whole earth and the air abound with life. A complete history of distribution would involve a consideration

[1] Sex may be included as a third principle influencing property-getting motives. This phase of the subject is considered under the anthropological section.

of the majority of biological problems. For our purposes it will suffice to call attention to a few of the most obvious results. *First:* distribution has subjected innumerable forms to the wide fluctuations of cosmic forces. This is notably true of the life in temperate zones. Nearly all forms of life in these zones (save domestic animals) either migrate, hibernate, or lay in a store of food at the approach of winter,—a fact of value for the present investigation. The ant, bee, rat, squirrel, pole cat, hamster, mole, not only burrow spacious underground dwellings but fill them with a store of winter food. Observations of these activities are so frequent, and the literature so accessible, that to give examples is unnecessary. Many birds also possess the hoarding activity and all are more or less able architects. The owl (*Stix Otus*) buries its surplus provisions like the dog. The shriker or butcher bird, having appeased his appetite with grasshoppers, mice, and small birds, still continues to slay and kill. His victims, he hangs or rather impales on the thorns of bushes or on twigs. A California woodpecker bores holes in trees wherein to place his booty. In autumn he may be seen pecking away at pines and oaks, and slipping acorns into the cavities thus made.[1]

Second: distribution has caused highly complicated relations and interdependencies among all forms of animals, even plants. All this has created new instincts and habits, and in some cases has modified structure and intensified, if not necessitated the accumulation of property. Says Semper: "It is clear that a certain interdependence between flesh-and-plant-eating animals must exist and find its expression in the proportional numbers of individuals of the two groups generally distributed over the face of the earth."[2] Along with this numerical food relation are associated facts that bear upon the present subject, viz.: that the activities and psychoses of the plant-eaters are pacific, timid, social, and associated in general with keen senses; on the other hand the flesh-eaters are cunning, stealthy, ferocious, leading selfish, isolated, and solitary lives. We never associate the terms cunning, stealth, avarice, glutton, morose and selfish with creatures like the pigeon, dove, deer, gazelle, camel and sheep. They characterize well types like the spider, owl, hawk, buzzard, fox, mink, bear, tiger, etc.

An illustration of multiplication and distribution modifying structure and necessitating the accumulation of a special kind of material is seen among different species of ants.

"Amongst the Amazon Ants (*Formica rufescens*) who not only do not debase themselves by working, but even have the

[1] Letourneau, Ch.: Evolution of Property.
[2] Semper, Karl: Animal Life, p. 51. Int. Sci. Series.

food put into their mouths by their slaves, the jaws have become elongated, narrow and powerful, and project in sharp points, very suitable for piercing an adversary's head, but unfit to lay hold of food. When one of these amazons is hungry, she taps with her antennæ upon the head of a slave, who injects food from her own mouth into that of her mistress."[1]

The yellow ant (*Lasius Flavus*) has domesticated the plant lice (Aphides) for the milk that they furnish. "As soon as one of these new herds is found by an ant, she returns to the nest and informs her companions. One or two ants then accompany her to the treasure, which in the future remains, night and day, under their watchful care. As the herd increases in numbers, additional herdsmen are called into service."[2] The constant guarding of the Aphides is due to the fact that they are eagerly sought for by ants from other colonies, and especially by the swift flying ichneumon, which uses the body of the Aphides as a depository for its eggs. It is observed that when one of these flies is seen hovering over the herd, the ants at once endeavor to chase her away whenever she alights. In addition to slaves and cattle, the products of agriculture as well as the grains of uncultured plants constitute a species of property prized by the ants of the southern portions of the north temperate zone.[3] I need only call attention to the Harvesting Ant of Texas. Moggridge,[4] one of the earlier scientific observers of the Harvesting Ants of the Old World, writes: "I then selected a nest where the coarse and hard rock lay much nearer to the surface, barring the downward course of the ants and compelling them to extend their nest in a horizontal direction. Here . . . I came upon large masses of seeds carefully stored in chambers prepared in the soil. Some of these lay in long subcylindrical galleries, and, owing to the presence in large quantities of the black shining seeds of Amaranth, looked like trains of gunpowder laid ready for blasting. . . . On carefully examining a quantity of the seeds, and minute dry fruits, he found more than twelve distinct species of plants, belonging to at least seven separate families. The granaries lay from an inch and a half to six inches below the surface and were all horizontal. They were of various sizes and shapes, the average granary being about as large as a gentleman's gold watch."

In leaving for the present the question of the acquisition of

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[1] Allen, Grant. Flash light on Nature.

[2] Weir, James, Jr.: The Herds of the Yellow Ant. Pop. Sci. Monthly, Vol. LIV, No. 1, p. 76, 1898.

[3] McCook, Henry Christopher: The Nat. Hist. of the Agri. Ant. of Texas. Acad. of Nat. Sci. of Phil. 1879, pp. 207.

[4] Moggridge, J. Traherne Harvesting Ants and Trap-Door Spiders. London, 1873.

property among social animals this speculation is made, to wit:—Those species that hoard up food stuff, or that slay creatures in excess of their needs, have *either* descended from a species whose social organization was complex, the labor of the members being divided into groups of fighters or protectors, builders and food gatherers,—the last named only surviving; or they were descended from a species which at some remote period were forced to pay tribute in the shape of food stuffs to some stronger species. As yet we are unable to justify the theory by facts from the lower animals. It finds some justification, however, in human history. The Jews appear on the theater of action as a pastoral people and owners of land. To-day they present the anomalous condition of a nation without a country. From the captivity in Babylon to the fall of Jerusalem in the first century they embraced more and more the advantages of a commercial life. They have posed before the world as an exclusive and chosen people. This, together with their thrift and virility, has engendered hatred among the Gentiles toward them, which has expressed itself in all manner of persecutions. The Jew practically bought his *right* to exist from powerful princes and noted warriors. They paid these "Lords of creation" hard cash for the privilege of living. Paying this tribute once was no guarantee that it would not be exacted again. In order to live out his natural life, and secure the same privilege for his children, it became most necessary for him to make money. The slow returns of a farm could not have secured him the desired lease of life. Besides, he could not have returned to the farm had he wished, since ownership in land was denied him. The natural aptitude of the Jew, his persecutions impelling him to make money, and the strict inbreeding of his race tending to conserve advantageous acquirements—all conspired to develop a people with both the ability and desire to make money. The present age is more liberal, persecution has ceased, but the scars are left—and the Jew remains a money maker.

Third: Multiplication and Distribution have thrown together in the same area or in adjacent areas different species and even members of the same species whose interests continually clash. Witness the extensive warfare among different colonies of ants[1]

[1] Grant Allen—Flash Lights on Nature, pp. 186-87—says: "But it (the ant) does not steal fully-grown Turf Ants; their habits are formed, and they would be useless for such a purpose. What the Warrior Ant wants is raw material which can be turned into thoroughly well-trained servants. So it merely kills the adult ants which strive to oppose its aggression, and contents itself with trundling home to its own nest the larvæ and pupæ of the Turf Ants which it has put to flight and vanquished. In process of time, these grubs and cocoons produce

or the fight to the finish between the rabbit and the comical little Puffin when the latter attempts to take possession of the rabbit's burrow for breeding purposes, or the terrific battles between the male seals for the possession of a nuptial court.

"The lion lives alone, or at most in a temporary family; but he needs a vast hunting ground. This territory must be well furnished with game, and he chooses it himself. Having done so he will allow no intruder to poach there. He has fixed its boundaries . . . If another animal of his own species ventures to infringe upon this domain . . . he protests, lays a complaint against the invader after his own fashion, and if the latter does not attend to him, has recourse to the *ultima ratio* of kings and lions—a battle."

[1] "The Wandering dogs of Egypt, have similar customs; each pack chooses a habitat, and, says an eye witness, 'Woe to the dog that strays into a neighbor's territory. Many times I have seen the other dogs fall upon the wretch and tear him to pieces.' 'The pariah dogs of India quarter themselves in the part of the town where they are born. Each of them has his district, 'police fashion,' which he clears of intruders, while for his own part he never crosses its boundaries."

Again, natural history abounds in observations of conflicts in bird families while defending their domain and hunting ground. More severe and even deadly they are if the contestants are flesh-feeders or fishers. In these cases ownership in a given area as a hunting-ground is absolutely necessary to the maintenance of life.

[2]The second principle met with in multicellular life, that stands in causal relation to the acquisition of property, or at least that creates conditions necessitating the acquisition of property, is death.

The preparations made by all multicellular life to counterbalance the ravages of death, the attempts to bridge over, as it were, the gap made by death, have a very significant influence in developing the property instinct along with other psychoses. In this connection the plant world deserves notice. First, there is a store of food provided for the tender developing plantlet; second, a protecting coat or pod differing greatly in

full-grown yellow workers, which, having never known freedom, can be taught by the Warrior Ants to act as nurses and housemaids, exactly as if they were living in their own proper city. I once saw in a garden in Algiers a great pitched battle going on between slave makers and the family of the future slaves, in which the ground was strewn with the corpses of the vanquished."

[1] Letourneau: Evolution of Property.

[2] Death may operate in unicellular life, but if so its operation has no appreciable value for the present problem.

thickness and hardness among different seeds; third, very often an oily or mucous substance in the protecting coat; fourth, the shape of the seed. The significance of this latter property as an aid to survival may be seen when one attempts to crush or to bite in two an apple seed or the seeds of the watermelon, or the orange. Then, too, the possession of hooks, wings, downy-hairs, and other devices for distribution, becomes still more significant when interpreted as a factor, making the chances of reproduction more certain.

In animal life the activities involved in amassing property in order to rear and care for the young till the period of parental independence, appear to exceed in their qualitative aspects those manifested for any other purpose, not even excepting those exerted in behalf of the individual itself. Paternal activities are the crowning efforts of the individual. Let us attend to specific cases. The yucca moth (*pronuba yuccasella*) having pierced with the sharp lancets of her ovipositor the tissue of the pistil of the yucca flower, lays her eggs among the ovules of this flower. She then collects pollen grains from other yucca flowers and kneads them into a pellet which she stuffs into the funnel shaped opening of the stigma, thus fertilizing the ovules. The fertilization of the ovules is necessary to the larvæ, which in four or five days are hatched from the insect's eggs. It has been ascertained that they feed exclusively on the developing ovules which would not develop without fertilization. Should every female yucca moth fail for one season to leave with her eggs the pollen grains—*the only property that she ever amasses*—there would be no forthcoming larvæ to bridge the gap created by the death of the mother moth.[1]

The mother wasps (*Odyneri*) perform a very similar feat. She "makes cells of sand, or any other material, agglutinated with mucous. She deposits an egg in each cell, and with it a store of small caterpillars as food for the larvæ against the time when they shall be hatched. These caterpillars she stings, not so as to kill them outright, in order that they will not dry up or putrify, but enough to paralyze them." The mud wasp of America deposits a half dozen paralyzed spiders with her eggs in the mud cells of her nest.

A certain ant common in Brazil, has the habit of cutting large round pieces out of the leaves of trees, which it conveys to its nest for the purpose of growing fungi upon them.[2]

In October, 1889, the writer [Kline] saw an army of large black ants near the banks of the Colorado in Texas, carrying roundish pieces of leaves cut from the grape vine, The army was twelve

[1] Morgan, C. Lloyd: Habits and Instinct; pp. 13–14.
[2] Allen, Grant: Flash Lights on Nature, p 193.

feet long and eight inches wide. They were marching with "closed ranks," and at a distance looked not unlike a monster green serpent. I followed this military procession with the interest of a schoolboy. The march was brought to a close by arrival of the ants at their nest. This consisted of a mound of earth about 4 inches high and 3 feet in circumference. Many carried their burdens in at once, others dropped them a few inches from the entrance and went in without them. I cut open a section of the nest and fonnd the leaves in small pockets, though in some places they seemed to be scattered without care. Some of the leaves were dry and crisp, others damp and covered with fungi, which growth I am now persuaded was the object of this vast leaf gathering.

The storing up of honey and pollen by bees for young and self is a common observation by every one. Among the fishes the stickle-back and hassar, sometimes called hardback, of tropical America, are noted for the elaborate preparation in their nest building and for the care they maintain over the eggs and young until committed to the water. The nest and its contents constitute the only property acquired by these species.

Many species of spiders, a few fishes,[1] one species of toad *(Pipa)* do not store up food for their young, but pack or carry their eggs about until hatched. In the case of spiders, the young are carried for some time—not unlike the young of the opossum and kangaroo—until they are able to take care of themselves. In these instances the young and sometimes the feeding grounds are the only objects to which the parent lays claim. The great bulk of the property-activities among birds are those exhibited during the season of nidification. Among many species it is the only time in which property of any sort is ever accumulated. It is their season of *mine* and *thine*, the season when the bird lives and works for its kind—selecting material and forming it into a nest, incubating eggs, watching, feeding and protecting the young. All these make up a most unique bundle of property-getting activities which, interpreted teleologically, are called forth in order that the species may survive, that death's gap may be bridged.

Mammalian life is one continuous sacrifice for its offspring. The developing embryo, except in the monotremes, receives freely the life-blood of the mother through a highly specialized vascular system until the time of parturition. Somatic sacrifice, however, does not cease with the close of intrauterine life, but begins anew through the functioning of the mammæ—the highest physiological expression of nature's determination to

[1] Günther, Albert C. L.: An Introduction to the Study of Fishes, pp. 160–62, 1880.

continue the ongoing of her species. These purely physiological somatic sacrifices are insignificant in comparison with the elaborate and continued preparations directed by instinct and intelligence. The most focalized form of these preparations cluster around motherhood and home. They exist for the infancy of their species. Every class of mammalian life makes more or less elaborate preparations in the way of home building and furnishing, preceding and following parturition. These homes consist of burrows in the ground, nests in trees, in logs, among rocks, and houses built on the ground, and in our own species the variety of structures ranges all the way from a cave to a brown-stone front.

The duck-mole (*ornithorhynchus*) constructs for her young a nest of dried grass and gum-tree leaves. The nest is placed about twenty feet above the water level, thus securing the safety of the young even at time of the highest floods. Other monotremes, like the porcupine and ant-eater, instead of building a nest for the young develop a dermal pouch on the ventral side in which the very imperfectly developed young are carried and nourished until they are able to provide for themselves. The duration of the pouch life of the young varies with the species.[1]

The rodents are remarkable for their burrowing and nidificatory instincts. Moles, rats, prairie dogs and rabbits all construct elaborate underground homes. Some are permanent dwellings, as in the case of the musk-rat, the mole and prairie dog. Squirrels, some species of mice, as the dormouse and lerot, build their homes in trees, bushes and even on growing cereals. Others, like the marsh hare, build an elaborate home out of grass on a bit of earth surrounded by water. Such a nest can shelter from four to seven young. Many herbivora like the deer, cow, and giraffe, seek isolated spots or places of natural shelter in which to rear their young. A few ungulates like the pig form a nest in which the young are nurtured for some weeks. It is a singular fact that although the hog is the symbol for greed, it is never known to gather property or provide for the future except at the time of parturition, at which time they often spend from two to twelve hours' labor in making a cozy home for their young.

In the summer of 1897 the writer [Kline] watched a young sow gathering material for several hours and forming it into a nest.

[1] The kangaroo, according to Owen, suckles her young for eight months. At the eighth month, the young kangaroo may be seen frequently to protrude its head from the mouth of the pouch, and to crop the grass at the same time that the mother is browsing. After leaving the pouch, it continues to return to it for occasional shelter and supplies of food, till it has attained the weight of ten pounds.

She was naturally wild, but my presence did not disturb her. I scattered with a rake the material she had gathered. This angered her, causing her to show fight. As soon as I disappeared she moved the scattered material to a new place and continued the work throughout the afternoon. This work preceded the advent of her family about 12 hours.

Species of *canidae* like the dog, fox, and coyote, and of *filidae* such as the cat, tiger, and leopard, build temporary homes for their young. Their homes are rude and simple, but they defend them, especially while the offspring are young—with greater courage and effectiveness than do some of the more clever home makers. In our own species, as with the rest of mammalian life, two forms of somatic sacrifice are made for the young. Likewise homes are built, furnished and defended.

But the boundaries of motherhood in the human species as in many lower creatures, as will be noted later, "are not limited by these material sacrifices." The Will to Live, the biological struggle to survive has developed in parenthood, the principle of transmitting both racial and individual experience to the young. It is an interesting and significant fact that length of days are added to parenthood in those species whose young can and do profit by conserved experience, while, on the other hand, the life of the parent stops not far from ovipitization or parturition in those species whose offspring neither need nor could profit by the experience of the parent.[1]

The exercise of this principle, viz.: conveying to the young the racial and individual experience, creating opportunities for and encouraging by example and otherwise—varying of course with the differences in the plan of life among the several species,—the exercise of those activities which are essential to the individual's progress begins very probably among the invertebrates, *e. g.*, ants[2] and bees. Its highest perfection, however, has been wrought out in the mammalian type of life.[3] So long as motherhood was consciously and unconsciously aware that wealth was power, and promoted supremacy, she amassed fortunes for her children, but when the idea "that knowledge is power" was grasped, and that, too, of a superior sort, she increased the means to educate her young. So deep-seated among many peoples has the belief grown that education does

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[1] "The duration of life is first naturally lengthened when the offspring begin to be really tended, and as a general rule the increase in length is exactly proportional to the time which is demanded for the care of the young." Weismann's Biological Memoirs, p. 155.

[2] Letourneau, Charles: Education in the Animal Kingdom. Pop. Sci. Monthly, Vol. LII, pp. 527-34. See also his late book "L'Evolution de L'Education.

[3] Phillips, D. E.: Teaching Instinct, *Ped. Sem.*, Vol. VI, pp. 188-245.

insure survival and self-protection that it has practically become universal for them.

If, then, the function of motherhood in this larger sense is to equip childhood to live up to the full measure of its potentialities, one would expect to find exhibitions of the growing traits of motherhood even before its advent; one would expect to find some of the mother-traits appearing in certain general relations toward property—relations, too, that are in contrast with those of childhood and old age. The structural, functional, and psychical changes at adolescence are in the main a preparation for motherhood. Our attention for the present, then, will center about this period. Before adolescence child nature is predominantly negative, selfish, as will be shown later. Getting, hoarding, having is the order of the day. Self-sacrifice is the key-word in the budding traits of adolescence. President Hall says: "The young adolescent receives from nature a new capital of energy and altruistic feeling." Dr. Lancaster[1] says, in his study of adolescence: "It is the great period in life for devotion to others, especially in self-sacrificing causes." What should we expect the attitude of the average boy and girl in their early teens toward property to be? Answers to Rubric VII of the topical syllabus printed below furnish a bit of data on this point. Three hundred and twenty answers were received, 145 males and 175 females.

TOPICAL SYLLABUS.

II. Psychology of Ownership vs. Loss.

I. (a) Relate an incident in which a child for the first time evinced signs of ownership; what, and why that particular object? (b) Likewise a child who is precocious in getting property, or making collections; what use and disposition are made of the articles?

II. (a) Describe a child who wants to own everything; who steals, begs, and cheats to acquire property; (b) a child who desires nothing, will not accept what is given, shuns the duty of custodian whenever possible; (c) a child who persists continually in amassing a special article; also a child with a passion to trade.

III. Describe in detail a quarrel among children about the ownership of some article; how decided; what was done with the article after the decision?

IV. Describe an instance in which a child long desired some toy or plaything, *e. g.*, wagon, gun, doll, and very unexpectedly received it as a gift. Give fully the child's treatment of the article, expression, etc.

V. What have you observed among children concerning the feeling of ownership in property and the influence it had over their attitude both toward the property and valuables in general, *e. g.*, care of books, tools, or a new article of clothing. On wearing the dress, how did it behave to parents, companions, strangers?

VI. (a) What effect has a new overcoat, high hat, high heels, rib-

[1] Lancaster, E. G.: *Ped. Sem.*, Vol. V, pp. 89–91.

bons, plumes, bright-buttoned uniforms, articles of jewelry, buttons, badges, etc., upon the self-confidence, self-assertiveness and personality of the wearer? What is your own experience in such matters? (b) What have you observed about persons collecting stamps, coins, autographs; and poems, ballads, pictures and the like for scrap-books; various and sundry articles for memory jngs, wall ornaments.

VII. (a) Have you noticed any difference concerning the kind of property desired and the intensity of the desire among different ages, sex and nationality? (b) Describe a period or periods in your own life or the life of another in which the value of long-cherished articles suddenly depreciated in your own mind until you relinquished them and accumulated others more to your liking. (c) Have you ever felt burdened by trusts of honor or emoluments or by property and desired to be free from all responsibilities, to abandon your desires and hopes in temporal matters and revel in primitive freedom? Have you personal knowledge, or heard or read anything of one taking the vow of poverty; or one who delights in poverty? What do you know of beggars? Their habits, laws, customs?

VIII. Describe the behavior of a person toward friends, society in general, business and other matters, who has come suddenly and unexpectedly into possession of comparatively much property; the same of one who has lost a fortune by fire, flood, paying securities, etc. *Note the first actions in each case.* Describe your own feeling at the sudden loss of a relative, friend, or property; likewise the feeling of being forsaken, dying in poverty, starving, etc.

IX. Consider a person who persistently and continually seeks positions of trust and honor. loves to be master of ceremonies, also a person fond of giving advice, likes to be consulted on various and sundry matters. *Note the age when these tendencies were first noticed.*

X. (a) Do you know and can you describe persons that have hid money and other valuables in out of the way places, *e. g.*, garden, cellar, roof of house, ditch, seashore, etc.? (b) Describe the worst miser you know; a man who apparently wants the whole earth. Likewise a spendthrift. Emotional and volitional life and home training and surroundings are also desired here.

XI. What member of the family have you observed to be the most favored in Wills or in other ways by the gift of property?

XII. (a) What have you observed of the habits and activities of bees, insects, birds, wild and domestic animals, that exhibit a sense of ownership and the desire to accumulate and preserve property? (b) Have you ever witnessed a conflict between different species or different members of the same species over the ownership of property, *e. g.*, food, particular spot of ground or object? (c) What have you observed or heard of dogs, monkeys, bears, etc., exhibiting a special fondness for a particular stick, bone, article of clothing, etc., or suddenly taking possession and defending at all hazards a manger, pigsty, baby crib, or what not; also of animals gathering food in excess of their needs?

XIII. Have you yourself had periods of intense desire to be rich? and state honestly why and what uses you would put wealth to; or do you merely wish to possess for personal utility?

XIV. Always state briefly age, sex, nationality, temperament, disposition, health, home influences, etc.

M., 20. Made a collection of guns, rifles and revolvers. After 20 he sold all and began collecting music and musical instruments.

M., 13. Took a great interest in collecting birds' eggs. He would walk almost any distance to get a new kind of egg. At 16 suddenly lost interest, wanted a library, horse and buggy.

M. Picture cards, marbles, spools, buttons, tops, and various other playthings lost their value for me at about 8. I then thought it foolish to have such things—wanted things more necessary, more important, things that I could do something useful with.

F., 18. From 9 until quite recently I was very fond of collecting "keepsakes." At a public supper would take a paper napkin; during an excursion to the lakes or seashore would get a peculiar kind of pebble or shell as reminders. At 15 this collection ceased to interest me. I began to gather rocks and botanical specimens, which still interest me.

F., 17. At about 4 I collected rags for doll dress and different colored buttons, about seven I did not care for either, and began to collect stamps and monograms, and picture cards, at 12 began to collect pictures of famous people from magazines. I am still fond of this work.

F., 20. Once had a craze for collecting stamps, this has died out. I have taken up the fad of securing names of my friends on a fan.

F., 19. From 8 till 14 I collected and kept separately pieces of silk, woolen goods and chally, with which I meant to make quilts. I finished one, another half done, a third commenced, when all my interest in them vanished. I soon began to keep programmes and tickets of entertainments which I had either attended or been invited to attend.

F., 23. I liked dolls until nine, then I changed to sled, express wagons and different sorts of books, at sixteen I lost my love for these and took up fancy work and music.

The following are observations of teachers and students:

"I have noticed that very young children desire things that they can see, feel, hear or taste, things that please the senses, when older, 6-12, they desire things that they can do things with, as express wagons, goats, tools, guns, dolls, fancy ribbons and the like."

"I think the value of the property is not taken into consideration with young children, but merely the getting of the property, having it, but as age increases the associations connected with the property, *e. g.*, souvenirs, etc., is valued more than the article *per se*."

"Young children rarely, if ever, make valuable collections, they collect anything that happens to please their fancy. As they grow out of childhood they get things that remind them of past events, things that mean something to them, things that can be used."

"I have noticed that young children desire to possess pictures, gay articles of clothing, toy engines, dolls, etc., etc., older children bicycles, horses, carriages, things that they can use."

"Girls that I have noticed seem to think most of their playthings and a good time until they are ten or twelve. Then they begin to care more for dress and appearance until they are 15 or 16, and then the desire to be considered smart and to be admired begins."

These reminiscences and observations offer nothing that is brand new, but they do continually remind one of his own experiences, they tap, as it were, the reservoir of the common mind and set flowing afresh the stream of life's experiences. And what do we read in them? First, that property getting in childhood is instinctive, an activity not to be suppressed or thwarted. What the child collects is a matter almost wholly of environment. The intrinsic value of the article plays no role, but collect it

must and will; second, that this promiscuous but continuous gathering is modified somewhat and directed to the accumulation of articles that can be worked upon, articles on which the motor apparatus of the child may repeatedly operate and not unfrequently develop a rude mechanical skill;[1] (these mechanical and industrial activities appear more or less prominent in the years just preceding puberty); that at adolescence the desire for material inanimate things is transferred to those of the animate, social and spiritual world. Now the friendship, the good opinion, the good will, the love, the confidence of, and for others constitute the world of values. For these things individual life itself is not too dear a sacrifice. The adolescent must love and be loved, must have friends and associates. "I used to collect picture cards, now I collect photos." "I grew tired of monograms, and have instead a fan with my friends' names written on it." "I gave up dolls and the like and collected napkins and other souvenirs that would remind me of stated occasions."

Childhood wants objects satisfying the senses and the instinct to have, adolescence wants friends and society to whom it may offer sacrifice. It is the beginning of the operation of that universal principle which offers up the best that is in the individual as well as his most valued belongings to the welfare of the species.[2] As the ferment of the adolescent simmers down and the possibility of his future begin to take shape he sets himself to accumulating goods and valuables that shall meet the drafts upon him at the time when life's stream is broadest and deepest — the period of motherhood.

There is still another time of life in which the attitude toward property invites investigation. I refer to the climacteric and post-climateric periods of life. This period begins on the average at about forty-five[3] in the female,[4] and from five to twenty years later in the male.[5] If by this time motherhood has furnished the offspring a home, has equipped them with money and education, in short, "set them up in business," is there still left anything to do for the welfare of her offspring? The fact that life in the human species does continue long after the climacteric argues that it must have some significant purpose. What is this purpose, this service which has earned for parenthood this long lease of life? What sort of property is of most worth in the eyes of the parent? To get some light on these questions we asked the questions found in Rubric IX of the syllabus. It

[1] Groos, Karl: Spiele der Menschen. Jena, 1899. pp. 90-147.
[2] Brooks, W. K.: The Foundations of Zoölogy, pp. 89-92.
[3] Tilt, Edward John: The Change of Life, p. 26. 1882.
[4] Stockham, Alice B., M. D.: Tokology, p. 276. 1893.
[5] Acton, William: Reproductive Organs, pp. 248-252. 1883.

will be noticed that no particular age limits are specified in the question, for obvious reasons. One hundred and fourteen papers were received on this rubric. 62 relating to males, 49 to females, and 3 to both. The ages range from 3 up to 66 years. 31 were accounts of persons above 40 years of age, 60 below 40, and over 50% of those below 40 were included between the ages 16 to 25. The following are the condensed reports of a few:

3. M., 20. "Always fond of giving advice, has grown more so within the past two years. Nothing pleases him better than to be consulted, even in trivial matters, as quarrels between boys or girls. He finds pleasure in correcting mistakes in grammar and pronunciation."

M., 40. Wishes to be leader in every new enterprise, if he cannot have this place he sulks and says he will have nothing at all to do with the matter. Gives advice whether wanted or not.

M., 50. Enjoys being trusted, to fill responsible positions, to lead in all the societies, especially the new ones, in his town. He enjoys giving a detailed talk in a religious meeting.

M., 22. Is continually putting himself in a position so that he will be appointed to usher at some affair, to act on a committee or have some office. I have observed this in private and secret societies, and also in church work. Is offended if not consulted about new enterprises.

F., 50. Always telling what to do, what dress to wear; she likes to be consulted in everything you are going to do; and very often in what you are to say to different people. She feels hurt if you do not follow her advice.

F., 32. Interests herself in every one, asking them questions and thus giving them advice. Likes to be consulted if there is anything special to be done in the town, if not consulted, she perhaps will not do anything toward helping.

F., 62. Is very fond of giving advice, especially in church matters—believes that if her advice is not followed the work will result in a failure.

F., 66. Gives advice to every one on every occasion possible. It makes no difference whether she has ever met them before or not.

M., 60. A school teacher, family grown and well to do. He himself had plenty for the rest of his life, yet he continued to teach. When asked why he did so, replied that his children might need his help.

M., 65. Owner of a large factory. Turned entire business over to his two sons, yet he always took the keenest interest in their enterprises. Grew anxious and sympathized with them during reverses and kept a watchful eye on their successes.

It would be palpably absurd to expect to find from these returns, in fact to find from personal observation, that fondness for offices of trust, for being consulted and giving advice is confined exclusively to middle life and old age. What we do see, and these returns emphasize it, is that from childhood to old age there is an unsatisfied thirst for power in some form or other. The methods of acquiring it, and the uses made of it, are as many as the individuals involved. No specific statements can possibly be made. In a very general way we may say that in childhood the desire for power is expressed in vague physical terms. The boy courts physical prowess and usually establishes

his authority over his fellows by displaying it in some extravagant form. Youth and manhood measure power in physical, material, and mental terms. How much can I do, how much can I make and acquire, only "to make money hand over fist," are among the serious questions of manhood. Then, too, power in the realm of mentality has a fascination for them. Its normal expression is the desire for that power which will equip for great tasks, that will aid to solve large problems, and make for success in life. In middle life and in old age the desire for power is shifted more and more toward the realm of mentality. The supremacy of the aged consist in what they know—not in what they can do or have. They are valuable to the race for the experience that they formulate and transmit as advice, precepts, wisdom and oracles. This is the period of true statesmanship, of wise men and law givers. The common mind in all lands and times has recognized and approved this. Accordingly, we find the things that are of most worth in the eyes of parenthood during the latter period of life are teaching, advising, and giving counsel to those engaged in the activities to the prime of life.

Conclusions. The effort in life to bridge the gap of death has given us *home* and *motherhood* with all their virtues[1] attendant.[2] They have become the motive to the greater part of human endeavor. Through them the great mass and tangle of property getting in civilized life takes on purpose and meaning. Parenthood amasses wealth, discovers and turns to account the forces of nature, capitalizes experience, concentrates within manual compass the feelings, doings, and wisdom of the long past and sees to it that all these things are duly possessed by her offspring. All the stocks and bonds of motherhood, all her landed estates, all her aggregations of lore and learning, all her inherited acquisitions and transmitenda whatsoever have been accumulated by her to pass as legacies to her offspring, that they may survive and live a complete life. This point of view enables one to see in the work and care of parenthood for offspring the origin of altruism, to which *property-getting-and-giving* has ever been the richest fertilizer, aiding in the flowering out process of all the altruistic sentiments. This must be so, for did we not punctuate our philanthropic intentions with a share of our property in some form or another, they would soon become as "sounding brass or a tinkling cymbal."

Section II. Anthropological.

In order to see the general ideas of the savage in regard to property it is necessary to find how much property the savage had,

[1] Ribot, Th.: The Psychology of the Emotions, pp. 280–81.
[2] Espinas: Les Sociétés Animales, pp. 444.

what his relation to this was, how held, etc. Some savage peoples, such as those found wandering in the woods of Borneo, Forest Veddahs of Ceylon and others, possess almost nothing. In this respect they are inferior to some animals. Others have merely their rude weapons.[1] Of necessity, these can accumulate nothing; as Mr. Keary says: "In order that social customs should attain any development the means of existence must be sufficiently abundant and easily procurable to permit some time to be devoted to the accumulation of superfluities or supplies not immediately required for use. The life of the primitive hunter and fisher is so precarious and arduous that he has scarcely either the opportunity or the will for any other employment than the supply of his immediate wants."[2] It is the satisfaction of these wants that measures his desires. The little he has is mere physical possession.

When we do, however, find primitive man holding property, it is to a large extent property in common. Letourneau[3] shows this very exhaustively, also Sir Henry Maine[4] and Laveleye.[5] La Fargue says: "very gradually did the idea of private property which is so ingrained in, and appears so natural to, the Philistine mind dawn upon the human mind."[6] Darwin, in his voyage of a Naturalist, tells how among the Fuegians, if a piece of cloth be given to one, it is torn into shreds and distributed among all. Mr. Leslie[7] says "a limited stock of certain personal things was early permitted," implying ownership in common. "A large body of facts combines to show that property was a social before it was an individul sentiment, and distinction between owners was at first assigned to one tribe of gens rather than to another. The first notions of property seem to be communal."[8] "The several forms of ownership tend to show that the oldest tenure by which land was held was by the tribe in common."[9] Many other investigators have held this view to a greater or less degree.[10] They find traces of the system in Europe, Asia, Africa and North and South America, in Australia and the Malay Archipelago. "Everything leads us

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[1] See Letourneau: Property, its Origin and Development. Chap. II, p. 24 ff.

[2] Keary, C. F.: The Dawn of History. 1888, p. 137.

[3] Property, its Origin and Development, pp. 401. London, 1892.

[4] Ancient Law. Also History of Early Institutions.

[5] Primitive Property.

[6] Evolution of Property, p. 28. London, 1890.

[7] Introduction to Laveleye's Primitive Property.

[8] Ward, L. F.: Dynamic Sociology. Vol. I, p. 483.

[9] Morgan, L. H.: Ancient Society, p. 542.

[10] In Germany, Haxthausen, Mauer, Engels, Bachhofen, Valentine, Mayer. In England, Seebohm, Gomme. In Russia, Schopotief, Kovalesky.

to believe collectivism was at its maximum and individualism at its minimum."[1] The reasons for this are apparent. First the very weakness of man made co-operation, a combining of strength and effort, necessary. As Topinard says: "Man lives in society because he has to do so like many animals."[2] Property thus was acquired in common. Furthermore it was necessary to the existence of the horde or tribe that it should be at peace with itself—the closer solidarity, the greater power. This would tend to a common ownership. As long as the savage had food to eat and shelter from the cold, he was satisfied. We must remember that the savage is a being of very limited experience, that his ideas of the relation of things are very vague. He has the physique of the man with the mind of the child. His conceptions of himself and his own body are weak and unanalyzed. Individul ownership implies that the particular object is shut off, boxed up as it were, labelled mine. This is beyond the savage.[3]

This primitive communism gives us a fair index of savage character and mind. It is the best of evidence of mental dullness, physical laziness, and primitive lethargy. It shows that the savage had not risen to the level of progression; it demonstrates the lack of individuality, of that self-assertiveness and push so essential to development. Men living under a system of communism are, as Dr. Brinton says, "classified like so many bricks."[4] It is primarily a system of monotony revolting to an independent, virile manhood, and to that active type of mind which glories in life as a struggle. This régime, however, had its use. Long continuance under a communal system developed those sentiments of respect for, and toleration of, another so essential. Human society is based on mutual toleration, on each man's giving up something for the good of all.

It was when man began to get clearer ideas of his own body, to distinguish between the self and non-self, that the idea of individual ownership became possible. The lack of knowledge of the savage of the limits of his own self are surprising.[5]

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[1] Primitive Folk. Elie Reclus. N. Y., 1891.

[2] Anthropology, p. 151.

[3] Principles of Sociology, Vol. I, p. 68, Mr. Spencer says the savage "lacks the extended consciousness of individual possession and under his conditions it is impossible for him to have it established, as the sentiment can be only by multitudinous experiences of gratifications which possession brings, continued through several generations; it cannot arise where circumstances do not permit these experiences. Beyond the few rude appliances ministering to his bodily wants, the primitive man has nothing that he can accumulate."

[4] Brinton: Pursuit of Happiness, p. 230.

[5] Tylor, E. B.: Early History of Mankind, p. 296 ff.

When man arrived at a clear notion of himself as an isolated individual, began to look in upon himself, he must have begun to get glimpses at the concept of individual ownership. For we find that the concept *mine* and self-consciousness are mutually dependent. Those states which come up into consciousness, one can be aware of, but not unless they are tagged *mine* will there be self-consciousness. It is here where the term *mine*, the conscious idea of ownership, must have originated in giving expression to these internal psychic states. The concept *mine*, then, is the focal point in self-consciousness. In order that a person may recognize these parts of himself as parts of himself, they must be recognized as *his* own. Neither memory of nor cognition of experiences or psychic states can be recognized as being a part of the ego if this concept *mine* is not present in them; if the individual does not recognize himself as the *owner*. So it must have been that the idea of individual ownership arose in recognizing internal psychic states, together with one's body and bodily feelings as being parts of self or belonging to self.

The earliest forms and usages of individual property show there was a sort of transition period. That the savage could not entirely think of external objects as *mine* and *mine alone*, unless they had a subjective element or subjective relation. Letourneau says: "The first private property was in objects forming, so to speak, part of the person, such as weapons and ornaments made by the possessor himself, and generally put in the grave with him."[1] "Australians possess for personal property the objects attached to their persons, such as arms or ornaments in the ear, lips, and noses; or skins of beasts for clothing; stones laid in baskets woven of bark fastened to body of the owner; personally appropriated by them, so to say, incorporated with them. These objects are not taken away from them at death, but are burned or buried with the corpses. Names are among the primary individual property we meet with."[2] "Rude weapons, fabrics, utensils, apparel, implements of flint and stone, personal adornments represent the chief items of property in savage life."[3] "In primitive society property extended to simgle personal belongings, to articles of adornment, to trophies of the chase or war, and to tools and weapons."[4] Dr. Rink says, the Eskimo recognizes ownership only in weapons, fishing boats and tools. Von Martius, speaking of certain Brazilian Indians, says: "Scarcely anything is considered strictly as the property of the individual except

[1] Letorneau: Property, its Origin and Development, p. 365.
[2] La Fargue: Evolution of Property, p. 17.
[3] Morgan, L. H.: Ancient Society, p. 527.
[4] Giddings: Elements of Sociology, p. 246.

his arms, accoutrements, pipe and hammock. "Every man claims a right in what he can make." [1] Haddon, in describing a stone axe found among the people inhabiting the islands about New Guinea, says: "The value of such an object seems to depend on the amount of work required to produce it; thus we arrive at certain primitive ideas. That work done gives ownership." [2]

We see from this that early ideas of individual ownership in regard to external things rose out of the idea of work put on them. The savage only possessed those things he made with his own hands, as his weapons, tools, utensils, etc. These things first existed as ideas in his mind, he thought of these in a subjective way as his own. And when these through the moulding and forming of material with his own hand and by his individual labor took on external form, it was but natural that the idea of individual ownership should extend to them. The fact that most all objects of personal property are attached to body, and the custom [3] of burning, breaking or burying these articles with man at death is evidence of the close relations of internal concept of ownership and external. Another suggestive fact is that the earliest forms of weapons were pushing weapons.[4] This seems to point to the belief that the savage considered his weapons almost as a part of his body rather than as some external object he could wield.

This attaching and putting of articles owned on the body intensified the feelings of ownership, through the feeling of pleasure arising from continual contact and because of the idea of permanence of ownership arising from the feeling that articles were safe from danger when on the person. This element of safety played a great part in the savage mind. Can we not account for the rise of ornaments in this way? Did not the attaching of things on the body for ornament take origin originally in this putting things owned on the body? Can we account in any better way for some of the absurd customs of loading one's body down with trophies, presents, weapons, etc.[5] That this custom of wearing property prevailed, resulted from the fact that the savage learned the value of individual property in individuating, in marking one man off from another. And so ornaments in general may have taken rise.

This whole development of idea of individual ownership in

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[1] Brown, B.: Races of Mankind, Vol. I, p. 59 (Speaking of Northwest American Indians).

[2] Evolution of Art, p. 78.

[3] Letorneau: Sociology. Chap. on Funeral Rites.

[4] Cushing: American Anthropologist, 1895. Article on the Arrow.

[5] For the way people loaded themselves down, see Spencer's Sociology, Vol. II. Chapters on presents, trophies, badges, etc.

the savage mind but indicates one of the great influences property has had in the evolution of mind. As has been shown previously the savage was originally in a state of lethargy. The only incentive to activity was to satisfy bodily desires. But when man had the notion of acquiring in order to individuate self, to increase self-importance, when he began to realize what individual property could do, life took on a different aspect for him. He broke away from his laziness, threw off his lethargy. His mind was stirred into activity. His desires became more numerous and extended to various things. And, above all, the desire for individual property is his first great incentive to labor. The effect of all this on developing mind hardly can be overestimated. Self-consciousness, together with all those feelings of pride, emulation, rivalry and competition arise out of this. Perhaps there is no one greater result arising from this than the development of attention; as Ribot[1] says, voluntary attention is the product of civilization, and that it is easily shown that before civilization, voluntary attention did not exist and that work is the concrete, the most manifest form of attention. But the ability to work has not come without a struggle. For as Ward[2] aptly puts it, "labor is not the natural condition of man. It must have acquired a powerful motive to curb and steady the wild and adventurous desires of the human heart and compose them to the monotony of toil." This incentive was the desire for individual property and the love of power that property brings. The labor may have been the enforced labor of women and slaves, but property was its incentive; and if attention has resulted from continued labor, we owe its development originally to individual ownership.

With the idea of individual ownership firmly rooted in the human mind, the tendency would be for the individual to claim all things he desired. The question now arises, not what are the motives for individual acquisition, but what are the motives which cause men to respect each other's possessions. If you presuppose that the proprietary right is an inherent characteristic of mankind, this question of toleration or respect for the property of one another is easily done away with. This is exactly the view the popular mind and superficial considerations would assume. Occupancy was possession. Each man recognized the natural right of the occupant. This is Blackstone's view, that of Roman law and the view in general. Sir Henry Maine[3] shows this view of the property right being inherent in man to be unscientific and irrational. Men had to learn

[1] Psychology of Attention, p. 43 ff.
[2] Dynamic Sociology, Vol. I, p. 541.
[3] Ancient Law, p. 237 ff, Chap. VIII.

to respect the rights of one another, and the proprietary right, as every other such abstract notion, was a growth in the mind of man.

If some right to possess individually did not exist, the idea of individual ownership could never have gained strength. For to own a thing implies a feeling of permanence in it; that one will possess it for some length of time. As the bulk of property was common in savage communities, and as the individual property was slightly confused with one's body, the idea of respect for possession among one another did not have to be very strong. As is natural under these conditions, individual ownership only cropped out at first in those things which naturally fell to the share of individuals and those things which did not interfere with common ownership. Among these might be classed presents given to those performing brave deeds in time of war, and trophies taken on the field of battle or in the chase; rewards of bravery, all of which were great stimuli for protecting and looking after common interests. Another way private property gained admittance was through inheritance. Sir John Lubbock thinks that in cases of legal revenge and punishment we can trace the origin of private property. He says: "When any rules were laid down regulating the amount or mode of vengeance, which might be taken in revenge for disturbance or where the chief thought it worth while himself to settle disputes about possession, and thus, while increasing his own dignity, to check quarrels which might be injurious to the general interests of the tribe; the natural effect would be to develop the idea of mere possession into that of property."[1]

Of all the different kinds of individual property which have effected most the evolution of mind and strengthened the idea of proprietary right, woman as property is perhaps the greatest. Letourneau, speaking of the position of woman among Australians says: "she is his domestic animal, his thing, his creature whom he has a right to beat, to hurt, to kill, or even if need be to eat."[2] "The woman is only a chattel on the same footing as the cow and the sheep, and she is accordingly appraised in terms of the ordinary media employed in the community, whether it be in cows, horses, beads, skins or blankets."[3] "In most brutal tribes man asserts his right of ownership in woman. The process of mating is by brute force, marriage is by robbery, and woman is in wretched slavery."[4] "Women are prized as wives, as concubines, as drudges; the

[1] The Origin of Civilization and Primitive Condition of Man, by Sir John Lubbock, p. 318.
[2] Letourneau: Sociology, p. 379 ff.
[3] Haddon: Evolution in Art, p. 229.
[4] Brinton: Races and Peoples, pp. 53–54.

men having been killed, the women are carried off along with other movables."[1] "Marriage as among other Indian tribes is simply a matter of purchase."[2] "Among all lowest hunting savages among Australians, Veddahs, Botucudos, the woman is not merely a sexual being. Her work is more valuable than her sexual qualifications, for to her share falls the taking apart and constructing the huts, the carrying of property during wandering, the gathering of insects, roots and fuel, the finding of wood, and most of all the preparing of food."[3]

The reason woman is held as property is due to her physical weakness and her peaceful character. As to why she was held as private property instead of common, there are several reasons. Women were more numerous than men. For while men were killed in war, women were held as captives.[4] A man could generally have a sufficiency of wives without interfering with the interests of others. In addition to this Westmark[5] has clearly shown that among all savage peoples some definite marriage relation existed which would naturally result in the ownership in women being individual. It is readily seen what a valuable chattel woman must have been. For all the hard work, all the drudgery, she performed. She too had to use all her ingenuity to provide food for her husband when he returned unsuccessful from the chase. If not she might become a victim to his appetite. "Among savages it is really the women who perform all the real labor of their societies."[6] And this enforced labor of women was not without its effects. For, as Dr. Chamberlain says, woman is generally more intelligent than man where stress is hard. This is because the stress falls on the woman and it is her cunning, her ingenuity that is called into play. Prof. Mason[7] likewise shows, many of the great arts took rise in the mind of woman. It was the result of her being property and forced to labor. Not only did she institute many things of value, but we cannot but believe that it was she who preserved art at times when the savage entered upon a predatory life and would have lost all the progress he had gained. Reclus in his Primitive Folk, speaking of the western Inoits, says: "Woman domesticated the animals."[9] These are but instances of the influence that property in women ex-

[1] Spencer, H.: Principles of Sociology, p. 650.
[2] Brown, R.: The Races of Mankind. Vol. I, p. 95.
[3] Cunov, Heinrich: Die Oekonomische Grundlagen Mutterschaft. Zeit. XVI, quoted from Solotaroff, H. American Anthropologist, Aug., 1898. Article—Origin of Family.
[4] Spencer, Herbert: Principles of Sociology, p. 650.
[5] Human Marriage.
[6] Ward: Dynamic Sociology. Vol. I, p. 644.
[7] Woman's Share in Primitive Culture.
[9] p. 58.

erted. So too it was in woman's mind that the idea of cultivating the soil first originated, out of which grew that greatest of institutions, agriculture. "It was the genius of woman that invoked the aid of the fire fiend to devour the forests, it was she who cleaned up the fields, planted the seeds, gave to the crops of maize and pumpkins all the cultivation they got."[1] "Man is a warrior and hunter; he resigns to his wife the labor of the fields."[2] "It is not impossible that this great revolution was specially due to women who alone were primitively charged with the collection of wild fruit and to whom for a long time agriculture was exclusively left."[3] In all this we see how property has influenced the development of mind. First it was because woman was property that she was compelled to labor. Secondly, the result of this labor was that woman was the main provider and did most of the property getting. And it is this labor, the ingenuity called forth in acquiring property which results in making woman superior intellectually to man, and history shows that property getting and intelligence are ever correlated.

The growth of agriculture, together with domestication of animals, caused a revolution in property and property ideas as well as in society. From it resulted the introduction of slavery in men, the domestication of animals, abolishing canabalism, the growth of agriculture requiring more laborers. The domestication of animals and the growth of slavery gave rise to a value which could be accumulated and something that could be used as a commodity in exchange.[4] Agriculture and the domestication of animals, by making means of subsistence procurable without co-operation, did away gradually with all ownership in common, the idea of proprietary right having gradually developed through an ever increasing individual ownership. The domestication of animals must have had great effect on the primitive mind, for here, as Morgan says, was a "possession of greater value than all kinds of property known previously put together. They served for food, were exchangeable for other commodities, were useful for redeeming captives, for paying fines, and as a sacrifice for the observance of religious rights. Moreover, as they were capable of indefinite multiplication in numbers, their possession revealed to the human mind its first conception of wealth."[5] This conception of wealth has played no mean role in the evolution of mind as well as civilization. What inventions, what discoveries, what knowledge

[1] Woman's Share in Primitive Culture. Mason, O. T., p. 147.
[2] La Fargue, P.: The Evolution of Property, p. 37.
[3] Letourneau: Property, its Origin and Development, p. 366.
[4] Our word pecuniary is derived from pecus, cattle.
[5] Morgan, L. H.: Ancient Society, p. 543.

have not resulted directly or indirectly from this seeking of wealth. The science of chemistry was born and nurtured in that of alchemy—a vain attempt to make gold. Agriculture and the acquisition of property through it, has taken first rank in widening the horizon of the mind, to say nothing of their effect on progress. It was agriculture which tended to identify the family with the soil[1] and to give man a stability of mind and character, one might almost say, a reflective turn of mind which a wandering life would militate against. Further, to succeed in getting wealth from the soil or from the raising of animals necessitated a careful observation of plants and animals; one, too, must learn of the weather and the seasons. And it was thus in seeking for wealth that man was training those powers of observation so necessary to the scientist; at the same time he was picking up valuable information in natural philosophy.

Dress is a class of property which also has had much influence on the development of mind. "Dress," says Professor Starr, "generally has been developed out of ornament. That it has, after being developed, often been turned into a modest covering and a protection, is unquestioned."[2] "Ornaments are of two kinds—those directly fixed into the body and those attached by a cord or band. As soon as man hung an ornament on such a band, dress evolution began." Dress had a great influence on mind because it is one great means of expressing one's individuality by external show, and also because of its power in marking off or individuating. The only individuality some people have is that expressed in their dress. (So it is that, as Professor Starr says), "in looking over the history of the race, we find many inventions have resulted, many discoveries been made, many arts been developed, in pursuit of new materials for attire and general intelligence has been increased thereby."[3]

Along with the great influences of property on mind and civilization modifying and changing both man's life and society, we should naturally expect there would have been developed a type of mind peculiarly adapted for the acquisition of property. Brooks Adams[4] attempts to show that economic competition has developed or selected minds best adapted to control and a type of mind in which love of gain is paramount, with indifference to the opinion and feelings of one's neighbors, with much self reliance and unusual industry. He calls this the economic type of mind. La Pouge goes further.[5] He thinks he has proven

[1] Morgan, L. H.: *Ibid*, p. 543.
[2] Popular Science Monthly, Vol. XXXIX, p. 789. Also Letourneau: Sociology. Chapter on genesis of shame.
[3] Popular Science Monthly, Vol. XL.
[4] Law of Civilization and Decay.
[5] Les Sélections Sociales.

clearly that the wealth producers or money makers and non-money makers have two distinct types of head as well as mind. The dolicho-cephalic are the money makers; the brachio-cephalic, the non-money makers. Though this may be going too far, still La Pouge has brought forward much evidence. At least it but shows that property getting as well as the having has had a much wider influence than is imagined.

In connection with property, especially property as power, are found some psychoses of not a little value: obedience to command and willingness almost amounting to a desire among a mass of people to be led; the tendency of people to believe in and give way to a man who makes large assumptions; the general feeling of contempt for a man who performs manual labor, in particular the agriculturist, arising from the time when no man who labored was a gentleman; considering wealth instead of merit the mark of superiority; feelings of servility and littleness in the presence of wealth. Pride is but a sense of superiority arising from the fact that one owes much of value and worth to society and friends. Vanity is the same feeling minus any such possessions.

Mr. Worthington says: "The attainment by man of that state of civilized life which suggested the advisability of, or necessity for, any system of government was coeval with the development of man's acquisitiveness and the possession of individual property. In other words, the idea of government was suggested and the institution in its primitive form was established chiefly for the protection of property and life; and the proper functions of government are to this day fully exercised when protection to life and property have been secured and peaceful and uninterrupted possession of these established and maintained."[1] The strength of the aphorism "property is power," is apparent from this standpoint. He who possesses most is most powerful. Not only is this true in the history of the individual, but also in the history of civilization. Dr. Brinton says: "So far as we can trace the history of man from the Old Stone Age upward, the one efficient motive to his progress has been the acquisition and the preservation of his property. This has been the immediate aim of all his arts and institutions, and the chief incentive to individual exertion."[2] L. H. Morgan says, that monogamy resulted from increase in the variety and amount of property through the establishment of inheritance in the children of its owner; that the influence of property in the civilization of mankind it is impossible to overestimate; that it was the power that brought the Aryan

[1] Worthington, S.: Politics and Property, or Phonocracy, p. 6.
[2] Brinton, D. G.: Pursuit of Happiness, p. 118.

and Semitic nations out of barbarism into civilization; the growth of the idea of property in the human mind commenced in feebleness and ended in becoming its master passion; that government and laws are instituted with primary reference to its creation. It introduced slavery and, after an experience of several thousand years, it caused abolition of slavery upon the discovery that a free man was a better property making machine.[1] Montesquieu, in his L'Esprit des Lois, tells how that in the Middle Ages the fear and superstition of the people was worked upon by both nobles and priests to embezzle them out of their belongings. And it was this wealth which by easing the hard struggle with cosmic forces for a few select ones made possible and gave opportunity for the rise of that learning and culture which has had such a great effect on the development of mind as well as civilization.

The history of the evolution of culture has been the history of the leisure class. The leisure class had its birth with the beginning of wealth and was alone made possible by the establishment of ownership.[2]

In the light of the preceding, we cannot but conclude that there has been no greater factor than property in broadening and developing mind and civilization.

Section III. Ownership in Children.

The study of the child mind in relation to ownership takes an increased interest and value, if its property activities be regarded both as *recapitulatory* of the racial attitude to property and *anticipatory*[3] of the adult's serious wrestling with property and fortune. Cataloguing the activities under these two categories is left largely to the reader. We indicate here from answers to the questionnaire, the beginnings of the sense of ownership and property-getting activities in general as found in child life.

In answer to rubric I. (a) [see syllabus] 185 returns were received — 93 males, 92 females — ages from 3 months to 72 months. These are divided into six groups,—3 to 6 months, 7 to 12 months, 13 to 18 months, 19 to 24 months, 25 to 36 months, 37 to 72 months.

First Group, 3 to 6 months, 39 cases.

F., 4 months. Cries whenever bottle is taken from her. Even if bottle was empty would not let it leave her sight unless given another. One lady writes: The first signs of ownership are exhibited when the child will not allow others to interfere with its bottle.

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[1] Ancient Society, p. 505.
[2] The Theory of the Leisure Class. Thornton Problem, N. Y.
[3] Groos, Karl: The play of Animals. 1898.

F., 4 months. Never showed sense of special ownership until another baby was brought to visit her. The second child was given F.'s rattle, whereupon F. began to cry and reach for it.

F., 6 months. In trying to amuse this child I took its rattle. She at once stretched out her hands uttering little sounds as *um, um*,— first time she had laid claim to anything.

F., 6 months. Given a rag doll, seemed to know doll belonged to her. When taken from her or when another child had it, began to cry and held out its hands immediately.

F., 4 months. Played with a rubber ring. I picked it up, she began to cry and hold out her hands. Put it down and she stopped crying. Repeated with same result.

Second Group, 7 to 12 months, 58 cases.

M., 8 months, was given a go-cart and after riding in it at different times, M., age 7 months, sat in it. M., 8, cried, pulled his dress and hair until he got it.

F., 12 months, was given a little white rocking chair in which she sat most of the time, would not let any one touch it.

F., 12 months, very fond of her cradle, always liked to be in it. If she saw any one sitting in it, she would endeavor to pull them away and would cry.

F., 9 months, had a tin rabbit that was pulled around by a string. When another little child took it she would reach her hands for it.

F., 11 months. Before she could walk or talk, seemed to think she owned her mother's lap and cried when any one else attempted to occupy it.

Third Group, 13 to 18 months, 27 cases.

M., 13 months. When Edward saw another child sitting in his little red chair, he at once wanted to sit in it. He would not sit in his sister's chair.

M., 18 months, owned a cap. My brother put it on his head. The little boy ran to him and cried "Take that off, that Harry's hat."

F., 18 months, had a little blanket she would not go to sleep without. She always cried "My blankie, my blankie," till she got it.

F., 18 months. Had a pretty little chair; if other children would sit on it or put their dolls on it, she would cry until they were taken off.

Fourth Group, 19 to 24 months, 23 cases.

M., 20 months. Had been given a great many playthings, but the things he seemed really to care for and *to own* were a woolly lamb and some building blocks.

M., 24 months, given a jumping-jack. He never seemed to make any claim to it, until one day a stranger said it was his. Immediately he declared that it was his.

M., 24 months, showed plainly he owned a toy express wagon by taking it away from a boy who came to see him, saying "That's my waggie."

M., 20 months, was given a toy horse. His brother wanting to play with it was going to take it away. J. would not let him have it, nor would he ever let him play with it.

Fifth Group, 25 to 36 months, 24 cases.

F., 36 months. Mother bought her a woolly coat. She was very proud of it and wanted to wear it whenever she went out. She did not like any one else to touch it.

M., 36 months, claimed one of his father's canes as his horse.

M., 27 months, had a piece of clothes line which he was very fond of. He used to throw it over the back of a chair and play horse with it.

F., 36 months. When years old saw a toy kitchen which she called a dust pan. From the day she saw it she was never quiet until her mother bought her one to play with.

Sixth Group, 37 to 72 months, 10 cases.

F., 48 months. When she was four years old, everything that was given her she kept in a box placed in one corner of a room. She was much displeased if any one should even raise the lid of the box.

F., 5 months, used to hide or sit on all her playthings.

F., 72 months. Owned a ball of which she was very fond. Kept it hid where no one could find it. Having a place for and hiding articles possessed are the common features of this group.

Our interest in these returns lies in what they suggest as to the way in which the property *instinct* and *concept* became etched so deeply into the mind.

It appears that those things which give satisfaction to the sensory side of the human organism are the earliest to be drafted in as property. Gradually objects that may be acted upon, that exercise the motor side are laid claim to. The human infant, like the young of all vertebrates, reacts the earliest and most vigorously at all those points that give information about want-satisfying objects. It goes without saying that objects which satisfy these "want-points" are the ones first claimed. It is not chance, then, that the highest per cent. of objects claimed by infants 3 to 6 months of age should be those that satisfy hunger or are instrumental in doing so. In the second group—7 to 12 months—objects appealing to sight are far in the lead. Objects satisfying the sense of touch rank next, followed by those appealing to taste and smell (hunger). The eye soon becomes the chief mind-feeder. Its objects have a permanency essential to the growth of the property concept. Objects that administer to bodily comforts, as a "special chair," "mother's lap," "a carriage," etc., begin to be appropriated at this age. Preferring certain spots in exclusion to others apparently as comfortable is a wide spread animal trait. This is true of nearly all domestic animals. The third group—13 to 18 months—introduces for the first time articles of motion, *e. g.*, go-cart, buggy, toy engines, etc., and articles of dress. At this age the motor-side begins its call for objects on which it may operate. In the fourth group—19 to 24 months—articles of motion are predominant. Articles used in imitation plays come in. The fifth group—25 to 36 months—shows that articles used in imitation plays are most frequently claimed and owned. The articles appropriated in the last group—37 to 72 months—are of a miscellaneous character. The most interesting and

significant fact presented is the effort of the child to hide whatever possessed.

The sense of ownership finds expression in children not able to talk in those "expressive" movements of body—of the hands—reaching and clasping; of the feet kicking; of the face—anger, pleasure, satisfaction; by crying, laughing, and other characteristic sounds common to infants.

These are the objective facts noted by the observers. Here and there we get hints of the child's attitude—consciously and unconsciously—toward property. The following facts may be noted. (1) In every case, from the youngest to the oldest, it was necessary that the child have the article entirely to itself; communism was out of the question. Extreme selfishness seems to be the rule; (2) generally the child does not lay claim to an object until it sees the object in the possession of another, or when some one else tries to take the article—in fact, at this point, the sense of ownership first gives itself definite objective expression; (3) The extreme forms of isolation and exclusion —two fundamental elements in the sense of ownership, crop out in the child hiding its possessions. I have found no case of hiding articles under four years of age; (4) The child may have a fairly clear idea of possessing an article himself, while not conceiving the same feelings to be present in any other child.

Here the question may be raised: At what age does the child have a clear notion of the concept *mine?* It is believed that the child under three years has an inadequate knowledge of his own body and of self.[1] Up to the second year it does not use *me* or *mine*, and very probably then does not understand their significance.[2] To illustrate this, Dr. Ladd one day asked a little girl what the *I* was that loved papa. She seemed not to understand for a minute, then she said: "O, now I know, it is my arms, because I hug him with them, and my lips because I kiss him with them."[3] Sully[4] says: "In this crude idea of self before the meaning of the "I" becomes clear, we have to suppose that the child does not fully realize the opposition of self to not-self, but rather tends to regard himself as a kind of thing after the analogy of other objects. In section II, it was maintained that it was impossible for the savage to have a clear conception of ownership until he had learned the boundaries of his ego, to distinguish self from not-self, and the same holds true of the child. No being can conceive of an article

[1] Hall, G. Stanley: Early Sense of Self. *Am. Jour. of Psy.*, 1898.
[2] Moore, K. C.: Mental Development of the Child. Psy. Rev. Supp., p. 141.
[3] Ladd: Descriptive and and Experimental Psychology.
[4] Sully: Human Mind. Vol. I, p. 476.

belonging to himself, if that self is not to some extent known. The conscious concept of property and of self thus seems to develop *pari passu*.

In answer to rubric I. (b) [see syllabus] received 188 answers—88 females, 100 males, ages 1 to 14 years. The following articles were collected by 188 children: Money, stones, blocks, cards, stamps, drawings of engines, marbles, bottles, handkerchiefs, spools, pipes, pieces of dress goods, nails, leaves, nuts, buttons, strings, insects, butterflies, beetles, pencils, frogs, carpenter's tools, garden utensils, flowers, dishes, broken china, shells, dolls, ribbon strings, pins, acorns, tin articles, paper dolls, old kid gloves, balls, fans, corks, salt cellars, ink bottles, hats, cigar pictures, colored glass, seeds, toy boats, knives, keys, boxes, colored rags, sleds, wagons.

The articles that the child collects, as previously shown, depend on the environment and home training. The child inherits only the activity to collect. To have something, to own something is needed to fill up an empty gap in the child's life. The article may be utterly useless: a heap of stones, pieces of wood, leaves, old gloves, rotten strings,—things for which the child itself could not invent a reason for collecting. The treatment of the collection is probably the best evidence as to the motive for collecting. It appears that the majority of children from 2½ to 6 years old either neglect their collections as fast as made, or hide them, taking a peep at them from time to time, but never making any use of them. This period of collecting might be termed a purely instinctive one. It would be worth some one's time to gather a wide range of data upon this one point. Our own returns (188) are inadequate to warrant conclusions. From 6 to 14 the disposition of the articles is indeed varied. They are hidden or forgotten; traded for others; kept to show playmates; kept through imitation and emulation, in order to get more than some one or any one else; sold for money; kept to play with; kept as ornaments—as beautiful shells, flowers, etc.; and kept to work with. The motives prompting and controlling the collecting activities of the child appear then to be, instinctive,[1] imitative, emulative, utilitarian, love of display, and love of the beautiful.

The most wide spread and interesting phenomenon connected with collecting is hiding the articles. The child takes a keen pleasure in having things that it may "use and abuse," hidden in some place which no one else knows about. Displaying them to friends occasionally is a pleasureable act, but the pleas-

[1] Kleptomania is an abnormal instance of this instinct. The subject cannot control his impulse to take any article he sees. He does not care for it afterward particularly. He must needs take it to satisfy his impulse.

ure is much sweeter if the articles are produced from quarters known only to itself. The love of displaying possessions, thereby attracting attention and eliciting praise, is characteristic of very young children. Sully[1] thinks love of approbation in the child is one way in which self-consciousness is developed. The following cases are typical of a number received on this point:

M., 4 years. Collected a large number of uncolored pictures. After gathering a box full he painted them, pasted them in a box and showed them to every one who came in.

F., 7 years, made a large collection of shells which she kept on a stand in the sitting-room. She was very fond of showing them, but did not want any one else to touch them.

M., 5 years, collects all the spools he can get, makes no use of them, but when his mother has company, he brings them out to show.

The collecting of money among children is common. This perhaps is due as much to suggestion as from any primary realization on the part of the child of the value of money. Collecting money is common to all ages from 1 to 14. The per cent. of boys is larger than that of girls in 135 cases.

M., 5 years. Saves every cent he can get which he keeps in a bank and if he wants any money to buy candy or anything with, he will ask some one else for money.

M., 3 years, would collect all the pennies he could get and hide them, where he thought no one would find them.

M., 3 years, asked every one who came to the house for money. If they gave him a silver piece, his eyes would sparkle and he would say—"That is worth something," but if given a penny, he would look at it and say—"Not worth much." Both, however, he would put away and not spend.

M., 2 years. My brother began to collect money when about 2 years old. Would ask his father for money and do things to earn money. Would not spend a cent, but continually tried to get more.

It appears that money is not collected with an idea of its purchasing power, but rather as something desirable to hoard, something not to use, but to save. We do not, however, put much faith in money collecting and saving as an activity reflecting a "money sense," for getting money is a thing which parents are constanly suggesting and encouraging in their children.[2]

Interesting in this connection are the money superstitions current among children.

"I remember two superstitions about money. One was a pot of gold at the end of the rainbow, and the other, if a piece of down from milkweed came to you and you caught it and told it to bring you twenty-five cents it would surely do so."

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[1] Sully: Human Mind. Vol. II, p. 101.

[2] For further study of money ideas in children, see article "Money Sense in Children," by Mr. Monroe. *Ped. Sem.*, Vol. VI, p. 153.

"I had heard about finding money in chimneys that were old."

"I never had any superstitions about money only 'The more you spend, the more you get.'"

"Whenever I found a cent, I often passed the place again and always looked to see if there was any more there."

"I had a superstition about money and that was I thought when there were bubbles on the coffee, if it was a large circle I was surely going to get 50 cents or a dollar—that is, if I could drink it without separating it—and if it was smaller, I was going to get a less amount of money."

"If a number of names beginning with the letter *m* were placed under a mossy stone and left there a week, you would find money at the expiration of that time."

"Very often I would make a hundred marks on a paper, each representing a white horse I had seen. I would then place it under a stone and expect to find money within a certain number of days."

"One superstition I had was if a person had white specks on the finger nails, one would be rich. Another, that if you had long hair on your wrist, you would be rich."

"If the palm of the left hand is itchy you will receive money."

"If you dream of counting your money, it is a sign of acquiring wealth."

"If you found any money and did not keep it, you would not have good luck."

"I had great faith in 'find a black tin, find a dollar.'"

"I thought if I got money on New Year's Day that I would get money every day in the year."

"One very common superstition was the saying 'money' three times, every time we saw a star fall."

"If we ever found a horse shoe with any nails in it, we were to obtain or receive a hundred dollars for each one. To find a pin with the head point toward you was thought to be a sign of increase in finances."

"We would go around and ask each person to bow his head and when we got a hundred crosses on a paper, each cross representing a bow, we would put it in the ground and would expect to find money in its place after three days."

"One thing impressed upon me very much as a child was that my arm being so long was the sign of riches. I knew also that the finding of silver money was a warning of coming riches."

"The only superstition I had about money was that some day I would be rich because my two front teeth were separated quite a little, and I was told that was a sign."

We asked in rubric II (a) for a description of a child who wants to own everything; who steals, begs, and cheats to acquire property. 406 cases are described—262 males, 144 females, ages from 1 year to 17 years.

Nearly every return gave an instance of a child who wished to own property far in excess of his wants or his ability to use the same aright. And over 80% of the 406 cases described a child who would beg, cheat, or steal to get the coveted article. Value did not seem to be taken into account. They were not regarded by the observers as peculiar or exceptional children. They would seem to be anybody's children; the average child. The following are typical cases.

M., 4 years, wishes to own everything he lays his eyes on—cards, stamps, bottles, pictures, etc.; he steals and begs and uses various schemes to get what he fancies. Makes no particular use of them, just wishes to keep them.

M., 5 years, is fond of slate pencils; often steals pupils' slate pencils when they are not in their seats. When questioned by his teacher how the pencils got into his pockets, he answered: "They must fall in my pocket."

M., 5. "Steals hammers and nails from the shop. Took empty dinner pails that men had left in the barn. Will ask for food when he is not hungry, and will store it away. Tried to steal a wheelbarrow, but it proved too heavy for him to move."

F., 8, bought a dress which she charged to her grandmother. Then took it to the dressmaker's and ordered it made up, but she never went after it. Entered another store and ordered two handsome pictures sent home. She went to a milliner's and selected two hats and ordered them trimmed, but never went for them. All these things she charged to her grandmother. Family suspected brain trouble, so sent her to a home for feeble minded. They, however, claimed there was nothing the matter with the child's brain, but that in fact she was a particularly bright child."

M., 5 years, frequents our house when we are eating. He will say, "What is that? I wish I had some. We never have that at our house, but it looks good."

M., 8. "Always getting things by begging, cheating and stealing. Tells his mother that they were given to him. He begs things for the church and keeps them for himself. He tells the neighbors' servants that such a boy sent him for his foot-ball, and then runs home with it."

Pedagogical inferences and suggestions are in the main patent. In some schools pedagogy is already plying her tools to this never failing ore supply. We venture the suggestion that collecting may advantageously be connected with nature study, geography, art, etc., making what might be a laborious task coincide with a fundamental desire. The child who makes collections of insects, birds' eggs, leaves or flowers, translates the beauties of nature into terms of self. They become thus a part of him, and nature is brought nearer. Emulation and rivalry in collecting would help to make the study more easy.[1] Another fact of not a little value is the habit of neatness, arranging by order, giving an idea of system and method, which collections bring out in the child. A large per cent. of children in the returns were most particular in regard to this. The power of observation is trained in the child's always having an eye out for certain things. Furthermore the child in making collections puts his own labor in the gathering. Hence these collections represent his own self. This is why the child will consider collections of old stones, or other objects of little worth, of much more value often than their brightest and most attractive toys. His own labor has given them their value. In our

[1] In some schools this is carried out and with advantage.

anthropological section it was seen that the first idea of individual ownership arose in those things in which man had put his labor, his inventive genius in making. The stamp of his own personality was on them.

The writers believe that as in labor ownership was conceived, so in labor are its real sweets to be found; and that ownership in general, which does not result from labor of some kind, has an artificiality about it, though it stands for the real thing, it is not. It is this artificial notion of ownership which has created the idea that manual labor is degrading, and which, in fact but a few years back, held that all labor was degrading—beneath a gentleman.

Here lies the true value of manual training in our schools. That the child may learn how much more valuable is the article, which he had made with his own hands by his own labor. It gives a knowledge from whence the sweetness of possession derives its source. The technique is of practical use, the learning how is valuable; but much more valuable is it for the child to learn the divinity of labor. No one who has worked with hammer and saw, and learned how rich in pleasure is the possession of an article derived from hard labor, can consider work a degradation. It puts the child in sympathy with labor and the laborer. Looked at from this point of view, no one factor has greater possibilities of developing the child than that of manual training. It puts the child in sympathy with men. He rubs in large grains of the stuff we call humanity, and for this reason it is essential that the child should be allowed to make things he wants, and also that the things made should *belong* to him.

We have found in these two rubrics, that the desire to own is one of the strongest passions in child life; that selfishness is the rule; that children steal, cheat or lie without scruple to acquire property; that they have no idea of a proprietary right. These generalizations will hold almost without exception for children under five years, for many children under ten, and in some cases even up to fifteen years of age. These things are natural in the child. Parents as a rule are continually struggling to keep them down; to teach principles of unselfishness; to teach not to lie, steal, cheat and beg; to respect the rights of others. This method may meet with more or less success. The writers of this paper are inclined, from reading over the rubrics and from personal experience, to say less. The problem is—what is the right method? Shall we hold with Calvin that the child is naturally a depraved being and that by hook or by crook we must take it out of him; or with Rousseau that by

nature the child is good and that nature wills the child to be a child before he is a man, and so "Let children be children."

Do we believe that the child recapitulates history of the race? If so we may not be surprised to find the passion for property-getting a natural one, nor that the child lies, cheats and steals to acquire it or that selfishness rules the child's actions. Selfishness is the cornerstone of the struggle for existence, deception is at its very foundation, while the acquiring of property has been the most dominant factor in the history of men and nations. These passions of the child are but the pent up forces of the greed of thousands of years. They must find expression and exercise, if *not in childhood, later.* Who knows but what our misers are not those children grown up whom fond mothers and fathers forced into giving away their playthings, into the doing of unselfish acts, in acting out a generosity which was neither felt nor understood. Not to let these activities have their play in childhood is to run great risk. It does no good to make the child perform moral acts when it does not appreciate what right and wrong mean, and to punish a child for not performing acts which his very nature compels him to do, is doing that child positive injury.

During the period of adolescence, generosity and altruism spring up naturally.[1] Then why try to force the budding plant into blossom? Instruct them by all means, teach them the right; but if this fails, do not punish, but let the child be selfish, let him lie and cheat, until these forces spend themselves.[2] Do not these experiences of the child give to man in later life a moral virility? Is not a man the stronger man for having in childhood done some of these acts? Has he not a more robust personality after them? He knows what it is to have sinned. He knows what he has to meet or stand against. These rank selfish deeds are giving the child an idea of self. The child must learn by them the idea of ownership before he can appreciate ownership in others.

The next question asked was—describe a child who persists

[1] Burnham, W. H.: The Study of Adolescence, *Ped. Sem.*, Vol. I, p. 176.

Hall, G. S.: The Moral and Religious Training of Adolescence, *Ped. Sem.*, Vol. V, pp. 205-206.

Lancaster, E. G.: The Psychology and Pedagogy of Adolescence, *Ped. Sem.*, Vol. III, p. 61.

[2] This lying, stealing and cheating in early childhood is not lying and stealing in reality at all. There is little moral element in it. Right and wrong are words which rest lightly on the child before they have learned to understand their meaning; and as Dr. Chamberlain says, the child is no criminal, no savage, is not bad in itself. It is the influence of restrictions upon these instincts which make the child bad. To the child all things are possible, good and bad. Results are what come from environment and education.

in amassing a special article; also a child with a passion to trade. (1) Very little is brought out in answer to the first of these questions besides that brought out in I:b. Cases of girls collecting were much more numerous than those of boys; articles collected came under the same general classes as made above. Trading is peculiarly a boy's trait, very few instances of girls being given. Every return described a boy who had a passion for trade. How strong this passion is among boys everyday experience teaches us.

M., 7 years. Had a knife he was very proud of, but when T. came to house with a drum H. wanted to trade the knife for the drum. When he obtained the drum he traded it for a bat, then the bat for a toy gun. He did the same way with all his possessions, even wished to trade his clothes. One day he traded his old straw hat for a marble, and was very proud of the deal.

M., 8 years. Has a great passion for trading. Everything he gets he tries to trade, not for the sake of gaining, for most of the time he loses, but just to satisfy his passion. He one time traded his hat; one warm day after school he traded his shoes. He even speaks of trading his father's house.

M., 12 years. Trades his things with his friends, and always gets the best of the bargain. He says he has a great knife at home, and praises it so that the boys are very anxious to obtain it. He lets on he does n't want to part with it, and gets the boys so crazy they are willing to give most anything for it. When he thinks he has found something better than the knife, he hesitates a little and then makes the bargain.

M., 16 years. Was known in school as the "Old Trader." Every day he had something that he wanted "to trade off." He trades chiefly in knives, watches and fancy marbles.

Any one who knows boys knows how strong is their passion to trade. It seems necessary for their development. The trading is not so much for gain or for any specific article, as it is to satisfy the desire or passion. It but emphasizes again how much property and property getting makes up of life. In the history of the race, when men began to trade, it marked the beginning of a great epoch. Dr. Chamberlain says that variations in the race commenced when man began to trade and fight. Trading is certainly a controlling element in the nature of developing the boy. It is an activity which could be used to much advantage in attracting boys to school. What interest it would rouse in the boy, bubbling over with the desire to trade and do business, if there were some system of banks or trading posts connected with the schools.[1] It is these things that the nature of the child goes out to that education needs to discover.

Rubric III. (1) Received 187 answers to this rubric—74 cases being females, 67 males, 42 where quarrel was between male and female, 4 sex not given, ages of children from 3 to

[1] School savings banks have been established in France with great success, and to some extent in England and America. Some very inter-

14 years. The quarrels were decided in five ways: (1) by some older person stepping in, 78 cases; (2) by strength or force. One child taking possession and holding it, 27 cases; (3) by children coming to some agreement as dividing, neither having article, or by one making some compensation to others, 27 cases; (4) by destruction of article either during quarrel or after it, 21 cases; (5) by one child giving in to another because of its persistent selfishness or strong will, 17 cases.

F., 2 and 3 years. K. and R. were given blocks to play with. One of them kept taking the other's blocks. Then they began to quarrel; neither one would give up her blocks. Finally they became so angry K. up and danced around the floor in her temper, while R. sat on the floor and cried. The mother heard the noise and came to the rescue. She took the blocks away from them.

M., 7 and 8 years. Walking with me over a field one day these two boys simultaneously found a watermelon. Each, of course, wanted it; it was a very small one, and not even ripe. They quarreled until one got it from the other and, taking it, threw it on the ground as much as to say, "There; you got it." Such cases as these I know many. Boys quarrel, then one gets it, and instead of keeping it, as one might suppose, he throws it away or destroys it.

F. A man who was passing along street one day threw a light-colored picture to two little girls. One of the children took possession of it, whereupon a quarrel ensued. Then S. quarreled as only children can, each claimed it and said the man meant it for her. They both cried, yet neither would part without settling the matter. Finally they decided to tear the picture in two pieces, each taking half. This was done, and by so doing the picture was spoiled, but the children were happy and the quarrel made up.

F., 6 and 7 years. Not long ago I saw two children quarreling over a piece of broken china, which they both wanted to ornament their play-house with. Each had hold of it. Finally the elder snatched it from the younger one and threw it down on flagging, breaking it into many pieces. In a very little while the combat was forgotten.

F. M., 16., had a doll which A. was sure belonged to her and she wanted it. She asked M. to give it to her, but she would not. She tried very hard for a few minutes to make M. give it to her, but finally she gave it up and let M. keep it.

In nearly all cases it was found if one child got the article that it did not seem to care about the article itself, and if the other child was not around so it could show its possession and thus tantalize other child, it cared no more about it. The object in asking this question was if possible to get some

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esting articles have been written on this subject showing the advantages of school savings banks. See, *e. g.*, the following:

Lend a Hand, 1895, Vol. XV, p. 202.

Journal of Social Science, Dec., 1888, No. XXV, Part I.

Educational Review, Vol. III, p. 72.

Annals of American Academy of Political Science, Vol. III, pp. 92-93, Vol. IV, pp. 972-974.

International Congress on Education, Vol. II, pp. 623-638.

Thiry, J. H.: School Savings Banks in the United States. New York, 1890.

light on the problem—what conception of right or privilege in possession in another has the child? How does the conception of proprietary right rise in the child? Is such a conception to be presupposed in the child as Blackstone presupposes it in early man, when he laid down the principle that first possession or first occupation was recognized as the right for an individual to own? Does the conception of proprietary right arise only through laws and restrictions imposed by a ruler, the principle laid down by Hume in the Leviathan; or is this conception a result of evolution, arising gradually in the child, as we attempted to show it did in man, by a gradually increasing intelligence—a closer adaptation of man to his fellow-men, making finer discriminations with the increasing complexity of his surroundings.

The results of the rubric in throwing light here were not very satisfactory. That the child at this early age has no such conception to start with is most clear, as this rubric and rubric I and II show. That out of their quarrels over articles, claimed by each, children must get some idea of a right in another to own, is clear. But the fact of parents interfering in so many cases, though this interference may teach ideas of the privileges of others. yet it vitiates the results by not letting the idea develop of itself, if it will. The cases in which children come to an agreement by themselves show that the child here recognizes some right in another; also cases where one child gives up to another more persistent. These cases, it is significant, occur among children 6 or 7 years of age and older. Younger children do not settle in this way. This seems to give support to the view we have taken in our anthropological study, that the conception of a proprietary right is a growth. One fact shown in this rubric is that in children under six, the desire for the article, to say "I want it," is sufficient reason to the child to have or own it, and it is because of this that quarrels over ownership are so common in children. Property is also one of the first things children quarrel over.

Rubric IV. (1) Received 305 returns—133 females, 72 males, ages 4 to 15 years.

State of children in first few moments is either extreme exaltation in which impulse is to run, dance or shout; or all action seems to be inhibited; or a combination of these two much like and often approaching hysteria. After this first shock, the one idea is to have every one see it and make much of it. The child lavishes the utmost amount of care; will scarcely touch the article; will allow no one else to touch it; will not let it leave his sight. Some sentences are quoted here taken at random from different papers:—"danced around with great glee—could not speak one word—I laughed and cried at once—at

first could not say anything but just stood and looked at it—jumped upon the floor, shouting and clapping her hands—so pleased she could not stop laughing—jumped up and down, clapping her hands and screaming with delight; did nothing but jump and laugh—did not speak for five minutes—face was all smiles, eyes wide open—became bashful, ran and got behind her mother—stood as though struck dumb for one moment, then danced and fairly screamed—so overcome she could not say a word—turned pale, held it at arm's length from him and never moved or said a word, finally broke down and cried—gave one loud shout—gave a little squeal of delight—hugged and kissed it, danced round and round it (a trunk)—I stood and looked but did not touch them, I had a feeling if I did they would vanish—so excited I could not sit still—gazed at it continually—had a feeling of great joy—was so happy could hardly walk around with it (a doll)—jumped up and down with joy—sat on it (sled)—clasped and unclasped her hands—cheeks grew pink—walked around and around with it, was so surprised could not speak a word—hardly left it out of her sight—said, it made me feel so jolly when I saw it sticking out of my stocking—was afraid to touch it or go near it, and simply stood there awe struck—grew exceedingly pale, then flushed and smiled brightly, and finally burst into a passion of tears—so overjoyed, cried and forgot to thank my parents—I jumped up and down, laughed and cried In the same breath—I first cried, then I laughed, then cried again—burst into tears—hugged it, kissed it, smelled it—could not speak for joy—burst into tears and could not be comforted for some time—was afraid to touch it."

This naïve spontaneity of the child gives to us an insight into the effects of property on the mind. Things are never so real, never so large, as in childhood. As the individual grows older, his experiences have broadened so much his horizon that it takes great events or circumstances to affect him. As Höffding says, the young man on beholding for the first time some grand and beautiful spectacle in nature, as a scene in the Alps, feels his soul swell up within him, his personality expands, embraciug it all, the whole aspect of the world and life seems changed and new, while the man who has looked on the same scene many times has no such feelings. He may appreciate it more, but his personality has enlarged to that extent that he is affected but little. This is why in studying men, the difficulty of finding the things which affect mind is so difficult; not so in the child.

So it is we see that these spontaneous reactions of the child on receiving some long desired article give evidence of not a little value in respect to the large part that ownership plays in

widening the scope of the mind and in enlarging self and self feelings.

Rubric V.[1] To the first part of this rubric, received 150 answers—74 females, 39 males, 37 sex not given, ages 3 to 18 years. Average age about 8 years.

140 of 150 cases show that children take much better care of their own property than that of another, that children are careful of ther own possessions. Only 10 cases where owning property made less careful, these were cases of children very young.[2] 47 cases or 31.3% of 150 cases show that children not only are careful of their own possessions, but after six years of age (average 8 or 9 years) that possession of a certain article makes them more careful of other articles of the same kind belonging to others, and articles belonging to others in general.

[2] Six out of 10 only had ages given; four of these were four years of age or younger.

These returns bring some very emphatic evidence to bear upon the question whether it is best for schools to furnish children with books. That they should not seem clear unless the books are given to children outright. Reading the returns of all the rubrics, and this one in particular, shows that ownership adds a dignity to the child, it expands the self and self feelings, stimulates feelings of pride. The things owned in childhood are very close to the child's inner being. As one little girl said, when a book was returned to her with pages turned down and leaves soiled, "I felt as though a part of myself had been injured." These things appear large to the child. Their life in a large part is wrapped up in the little world of their toys, dolls, wagons, and books. So when we say it is better for a child to own its books and other school appliances, we bring not only evidence of its practicability as a saving and better keeping of these things, but we urge it for higher reasons, claiming that the sense of possession fills a gap in the child's nature, adding to their dignity, self respect, expanding the feelings of self, giving an idea of one's worth and responsibility, and that these are factors of importance in the child's education; and we believe because of these very facts that the child takes more interest in their books, that they get more out of them.

M., 5 years. Tom was always careless about his books. The books were furnished by the school, and he had ruined two books since he began going to school. His teacher gave him a picture book for being regular in attendance, and he was very much pleased with it. He would not allow the other boys to look at his book or touch it unless their hands were clean. Soon after he was given this book he began to erase the pencil marks from his school book, and he said "I don't suppose teacher wants her books all dirty any more than I do."

[1] Topical Syllabus. II. Psychology of Ownership vs. Loss.

M., 10 years. Was always careless of tools. Left them out nights, lost them, etc. One Christmas he was given a set of tools, and he became very careful of them. Through this he was led to be careful of the tools of others.

M., 10 years. Used to destroy a great many books until he was given some of his own. He was very careful of them, and covered them so they would not get soiled.

F. Used to tear books that they gave her to look at, tear whole leaves out and fold others over and over again. But when one Christmas she received a book of her own she was just as careful of it, and afterward she never tore the leaves of books or even turned them over.

"I have observed that it makes children more careful of an object to own it."

"Children in nearly all cases manifest a desire for ownership in property of some kind. They usually exercise great care in handling their property and placing it in its proper place."

"I have noticed that children take excellent care of any article that they *feel* to be their own."

A point of not a little interest to the writers arises from the fact that 47 cases or 31.3% of 150 cases show that it is out of their own possessions by making objective those feelings of care of property, love of possession, pride in ownership, or, in other words, realizing that such feelings exist in others as well as in themselves, that respect for others' property comes, and some notion of a proprietary right obtains. In the rubric on children's quarrels among the young children—ages, 3-4-5-6, that the desire or wish for the article seemed to be a sufficient reason to them to possess it. "I want it," was enough. They could not see then why they should not have it. Among the children at this age we find little care or respect for others' property. The children of the 47 cases above were, on the average, eight or nine years old, some much younger, some older. In these cases the process was purely psychological. The child reasoned from its own desires, that they were as strong in others; that if they did not respect the possessions and property of others they could not expect others to respect theirs. This corresponds to the growth of the conception of property in the mind of primitive man.

From this study it is easily seen that the relations between childhood and property are very close and very important. They throw light not only on psychological phenomena, but also bring up questions in pedagogy of interest and value. Property is a great factor in developing the mind of the child. We see its relation here to the development of the five primary senses in early childhood; its power in teaching the child about his own self; how it feeds self consciousness, gives feelings of importance and worth, enlarges personality, develops respect for property in others by having property of one's own, quickens activity of mind. All that property has done in evolving the mind of man is repeated to some extent in the history of child-

hood. Above all property getting in childhood is of prime importance because it is *anticipatory*. Adult life is largely made of acquiring property. The child in his tenacious acquisition, his extreme selfishness, is preparing himself for this struggle. Prof. Groos[1] says: "I regard the instinct whose mandate in the struggle for life is, keep what you can get, as very important. Men and animals must learn not only to acquire, but also to defend and protect their property with tenacious energy."

Section IV. Property, Personality, and Fear.

The following answers to rubric V (latter part), VI, VIII, of the syllabus are given in the interests of the problems of this section.

Rubric V 160 returns, 126 female, 15 male; 19 sex not given. Ages 1 year to 16 years.

F., 11. With a new dress on was cold toward her companions, and not disposed to obey her parents.

M., 15. When he wears his new suit, stands straight, walks proudly, and is more polite than usual.

F., 9. Changes her general attitude as soon as she gets on a new article of clothing. She acts like a different person.

F., 7. When she puts on anything new, always acts ashamed, and tries to keep out of sight. It makes her over self-conscious.

"On wearing new garments, a feeling of pride and desire to show is almost always manifested. Have observed children on meeting to make their new garments the first topic of conversation, *i. e.* before any greeting, *e. g.*, 'I've got new shoes,' etc. Bashful children, however, will not put on new style garments, and do not like to appear in a garment until it has been worn for some time. They imagine every one looking at them. It increases their self-consciousness."—[From a professor of long experience.]

Rubric VI, 232 returns,[1] cases of all ages.

M., 34. "Dress, plumes, buttons, badges increase our egotism, measures our opinion of self. I have noticed this in myself and others."—[Pres. State Normal School.]

M., 32. "Usually one feels more self-confident in good clothes. Have made many a poor recital in school and in college because I was poorly dressed. One is much more assertive when well dressed. The effect is especially noticeable in women."

F., 7. Had to recite in school. Asked her mother if she could wear her new dress and ribbons. "Mamma," she said, "I'm sure I can speak better if I am dressed up."

F. (supervisor to department state normal school) says she "can teach much better in new clothes."

F., 20. "Wearing new clothes and finery does not make any difference in the treatment of my friends, still inwardly I have a great deal more confidence in myself. If I were obliged to wear an old dress to a party my whole evening's enjoyment would be spoiled, while if I

[1] Groos: The Play of Animals, p. 165.

[1] A very valuable group of returns. Their value justify more adequate treatment than can be given here.

could have a fine dress on I should have a grand time, should feel like suggesting new games and in general taking the lead."

M., 26. "Am better pleased with myself when well dressed. Can do more and better work."

M., 30. "When well dressed I have sometimes felt quite proud, ready to make any statement and to back it up whether it was right or wrong."

"Any new article of clothing or ornament which the child's fancy or experience associates with certain characteristics tends to raise or lower the child to the sensations and actions in keeping with these characteristics, affecting accordingly its self-confidence, self-assertion and personality. Children are unusually quick to catch the spirit, as it were, of their apparel, especially if it is new. With children the apparel is something of a moulding influence while with the adult it is more an expression of personality, though in both it is the consciousness of what the apparel speaks to others for self that helps or hinders. In my own experience it is difficult to feel a full measure of self-respect and the self I would be when I am conscious that my apparel is not appropriate on the occasion."

The following phrases occurred most frequently in the returns, as descriptive of the effects of dress. "Gives a dignified bearing," "forgot my timidness," "increased my self-respect," "can never act natural in new clothes," "feel increased in size," "feel in better state of mind," "felt older," "makes me awkward, bashful and shy," "increased self-confidence and importance."

Rubric VIII. 229 returns descriptive of the effect of sudden and unexpected increase or loss in property, and the loss of relatives and friends.

"A gentleman in good circumstances, greatly loved by the community, came into possession of much property. He forgot his old friends and became idle and dissipated."

M., 60, "inherited a small (to him large) fortune. The first thing he did was to tell all his friends and invite them to a supper. Before this he had been rather a quiet man and not given to pushing himself into anything. Now, however, he was heard from in most enterprises."

M., 45. "Came suddenly into possession of a great deal of money. He became very disagreeable socially, and was considered mean in business, his family was about as bad off as before, for his new wealth made him stingy."

M., 30. Became suddenly rich by the death of a relative. His first act was to invite his frends to a champagne dinner, and the next day buy a fast running horse. All that he seemed to care for was a good time and have all about him happy.

F. "This young woman was quite poor; married a young business man, who took her to a nice new home which he had built. The change made her proud, slighted her friends and relatives and became generally disliked. Age improved her manner."

F., 26, "of good ancestry but very poor, married a rich man. She at once dressed extravagantly, entertained lavishly, is generous to society and friends, heads charity lists with large sums of money. Men say her husband's financial ruin is simply a question of a few years. She flies from one excitement to another; before her marriage her life was quiet and uneventful."

"This young man always had a hard time to get along in life. At

the age of 19 he inherited a vast fortune from an uncle. The night after he heard of his fortune he gave a grand dinner party to his poorer friends, and did all he could to make them happy. He afterwards did much for the poor, and was blest by all who knew him."

F., 25, "father very wealthy, she was greatly admired in all the social circles—she gave parties, teas, etc., to which nearly every one in the small town in which she lived was invited. At the death of her father, it was found that the estate was completely involved; that she and her mother owned nothing. She committed suicide in a few days."

"This man, when he lost his money, tried to avoid meeting his friends and did not like to be spoken to."

[Many cases of this nature.]

"When my favorite uncle died I remember that, at first, the feeling of resistance was uppermost in my mind. I did not think he *could* be dead, he looked so calm and peaceful, just as if he were asleep, but when the fact did strike me, it seemed as if something had gone out of my life, as if there was something lacking in everything about me."

"My first feeling at the sudden loss of a friend or relative is one of numbness. I cannot realize the loss all at once, and it does not seem to have really happened."

The changes in, and fluctuations of, personality under the stimulus of property are neither peculiar or exceptional psychoses, that appear only under the very best test conditions; they belong to the common stock of every-day experience. We therefore appeal to this common wealth of experience both for data and for justification of what follows. The observations recorded above are merely introductory and suggestive.

We have seen that the child lays claim earliest to those things that satisfy its wants in the sphere of instinct and the senses. What the child does in this instinctive and natural way, the adult strives to do through the myriad devices of the intellect, but the aim is the same, *i. e.*, to satisfy wants and enlarge the *pleasure field*. Property, then, is an instrument to avert pain and procure pleasure. Considered psychologically, property is anything which procures pleasure and satisfaction to the individual, and anything is a loss that induces want and pain. In this sense, a beautiful painting, a landscape, a gorgeous sunset is property to any beholder, while the *possession* of a pair of boils is a decided loss, although the former may vanish within a few seconds, and the latter remain six weeks.

The manifold wants of dress come next after those of physical hunger and thirst. Prof. James observes: "There are few of us who, if asked to choose between having a beautiful body clad in raiment perpetually shabby and unclean, and having an ugly and blemished form always spotlessly attired, would not hesitate a moment before making a decisive reply."[1] Objectively, our clothes argue,—persuade, or repel; command and talk for us. They project and partially represent the social

[1] James, William: Psychology, Vol. I, p. 292.

self. They are our envoys extraordinary. Subjectively, good clothes enlarge the pleasure field and increase the feelings of size, confidence, egoism, self-consciousness, courage, etc. The self-feelings among children and youth may be so intensified thereby as to create disturbances in their social strata. Lotze emphasized the fact that clothes aroused the feelings of physical extension, and that one's personality was enlarged by them through our bodily parts being[1] enlarged as to sensation in this or that direction by the articles attached. May not this expansive, self-assertive effect of dress on personality account for the custom of warriors of all ages entering battle decked out in rich attire—with blazoned shields, glittering steel, waving plumes, and bright raiment? The slang word "fierce" is attributed to one apparelled in a gorgeous costume.

The property value of one's name deserves the space of a paragraph. When Shakespeare said "what's in a name?" he propounded a question of not a little psychological interest. A man's name is a possession which is closely assimilated with his ego. As has been said "the name has grown layer by layer." It has grown with the ego and the man. It would be an interesting study to learn from married women their feelings on losing the name with which they had grown up and coming into possession of a new one. The writer [France] finds on limited inquiry that there are very peculiar feelings of the self having lost a part of itself, of almost shame on writing or giving the new name, and a lack of at homeness with one's self.

Prof. Sanford has defined personality as "the sum total of all the reactions that can be got from an individual at any one moment." A study of the *first reactions* of individuals who have come *suddenly* and *unexpectedly* into the possession of a large fortune; and of those who have sustained great and sudden losses, would show, perhaps, the most fundamental effect of material property on the ego. The first reactions under such conditions are most likely to be the instinctive, unconscious, flashing out of the real naked ego before the intellect can get her inhibiting machinery into working order.

Of the 229 cases on this topic (Rubric VIII) 60 describe the behavior of persons made suddenly rich; 51, persons meeting with sudden loss; and 118 are descriptive of feelings at the sudden loss of a relative, friend, etc. 10% of the 60 cases are described as continuing in their ordinary affairs unchanged. They went about in the even tenor of their ways as though nothing had happened; 8% immediately turned spendthrifts, and prodigals. They seemed pleasure-intoxicated, bent on giving the passions the widest possible amplitude. Few of these

[1] Lotze, Hermann: Microcosmus, Eng. Transl., Vol. I, p. 592.

cases ever face about and settle down to business; 20% at once conceived some generous deed,—"gathered their poor friends in for a dinner,"—headed some humane and philanthropic movement, "began to help a poor boy to prepare for the ministry." They are often described as loving every body, even becoming good to animals; 38 per cent. are described as haughty, proud, arrogant, forgetting and "cutting" their old friends, domineering, harsh and cruel to servants, unsociable; some turn out misers. It must be stated, however, that some of this portion of the returns are seriously damaged by the evident presence of the "green-eyed monster" which, of itself, is an interesting property psychosis. There seems to be greater uniformity of behavior among those sustaining sudden loss. The majority have little to say, they avoid old friends, seek seclusion, and maintain a dogged silence to the world. They are often found in deep study, overheard talking to themselves. Some commit suicide. And more than we are aware of spend their last days in an insane asylum. Of course some vigorous and well poised souls begin cheerfully over again.

Disregarding a few exceptional cases, with the knowledge of new possessions personality sallies forth with the altruistic and the whole host of self-feelings wonderfully intensified. At the news of a wrecked fortune personality is timid, silent, evades society like the peafowl with lost plumage, and is at times seized with morbid fears. Wherefore does property have such transforming power on the ego? Why these cataclysms in the nature and disposition of man at an increase or decrease of things owned?

If we view conscious personality subjectively, we find that it is not a constant entity but rather a concensus of those things present at any time in the stream of consciousness.[1] The constituent elements in the mosaic of personality are what interest us here. What are they in the main? We have observed repeatedly that personality grows in proportion as the things one recognizes as his own increase, and that it shrinks, that much of it becomes as nothing, as the things once owned are swept away. Hobbes says property is grounded internally or psychologically in the consciously apprehended capacities and requirements of human personality.[2] Jhering, in his "Struggle After Law,"[1] says: "In making the object my own I stamped it with my own person: whoever attacks it attacks me, the blow struck it strikes me, for I am present in it." Is not this the answer to our query? The recognition of things

[1] James, W.: Psychology, Vol. I, Chapter X; Ribot: Diseases of Personality; Binet: Alterations of Personality.

[2] See "Theories of Property," Pol. Sci. Quar., Vol. I, by Prof. Newcomb.

[3] Am. Ed., p. 55.

owned by me as mine is the material that makes up much of my personality; and the concept *mine* is the cement to the entire mosaic mass constituting the ego. The attitude of monks, nuns and hermits towards property is an illustration in point. The one aim of their lives is to subjugate self, annihilate their *own* personality in order that they may take on the likeness of another. To do this they dispossess themselves of everything, wear the plainest clothes, often even expel their own ideas and thoughts. Most convents and monasteries forbid their inmates to own anything.

Another illustration showing that property is the very backbone of personality is seen in general paresis. Here, under the processes of devolution, under reversionary conditions, the one great delusion present is that of vast wealth; the idea of ownership stands out in the mind in relief amidst the crumbling and fading away of all other psychoses. Again, the prospect of great wealth, a promising scheme whereby a fabulous fortune is to be realized, *e. g.*, the South Sea Island project, the scheme for extracting gold from sea water, a trip to the Klondike, will take away the good sense, mother-wit and judgment of many people. Under these conditions their credulity runs riot; any device, however absurd, is wholly adequate to the end in their eyes. In fact they will not attend to details, will refuse to consider ways and means, so blinded have they become in dreaming over the fabulous returns at the goal. When we consider that no one factor is so intimately associated with all of life's activities as property getting; that property has been and is the one great sessilizing agency for the human race, converting nomads to husbandmen; that mind and civilization have developed through it and by it, it is no wonder that shattered and wrecked fortunes should be accompanied by dismembered and tottering personalities.

Probably the most general and most urgent motive prompting the acquisition of property in its many forms is fear. The absurd and outlandish practices of the miser will serve us as an introduction to this phase of the subject. The items here recorded are taken from 104 returns to rubric X.

M., 32. Crabbed, dishonest, had but few friends. Had one child, a son, to whom he willed a large pile of almanacs. The son was on the point of burning them when he happened to look in an almanac and found twenty dollar bills between the leaves. By looking carefully through the file he found a large sum.

M., 80. Lives by himself in a little old red house. Works very hard, eats but little. Goes to bed early in order to save oil and coal, although he has plenty of both. Hides his money in many odd places: stove-pipe, under the carpet, buries it in the cellar. He was not always this way; became so since the death of his wife about four years ago.

F., 60, lived in a garret, thought to be very poor. Ate the poorest

food, finally died of starvation. When her room was searched four bank books were found and deeds of a great deal of property—the whole amounted to about half a million dollars.

F., 63, lived alone, dressed poorly, neighbors thought her poor. She aroused their sympathy until they practically supported her. She was found dead. While disposing of her effects to defray funeral expenses $3,000 was found stuffed in an old clock.

M., 70, lives in a dirty old hut in the woods. He goes ragged, dirty, hair and beard greasy and unkempt. He goes hungry all the time. He is very wealthy. Keeps a portion of his money buried underneath one of the boards in the floor of his hut. When his wife died (she was as miserly as he), by her request he buried her himself, so as to save the expense of a funeral. [Several cases of this sort.]

M., 65. "Worth thousands of dollars. Lean, sallow man, is never seen in any kind of society, never helps the poor, churches, hospitals or asylums. Disappointment in love lead him to be so miserly."

Rubric VIII. Last Part.

M., 33. "Have always felt that it would be such a disgrace to be buried at public expense."

M., 39. I have often been haunted with the fear of poverty and dying in want. It is a most distressing and depressing state of mind.

F. When about 15 I had melancholy fears of poverty and loss of friends. An entrance in a diary on one of my birthdays at this time has afforded much merriment. I opined that at thirty I might be "alone, an orphan and a beggar."

Carlyle declared that the hell English people fear most is poverty. We think the declaration might as well be made to include the rest of the human race, for in matters so fundamental there is slight room for differences.

Poverty is Pain. It always has been and is ever enlarging the pain field. Its areas include ignorance, bondage, human slavery, cruelty and misery in its divers forms. Fear is the dread of pain or of the possibilities of pain. The fear of poverty arises in anticipation or dread of the pain that it may cause. The fear is as deep seated as the suffering thereby has been great. There is no cause for wonder at those nameless feelings of dread that steal over one at the thought of being left defenceless in the world without a cent, of being suddenly cut off from the pleasures that delight us and of being assimilated with outcasts, charges, and irresponsibles, of spending one's last days in the poor house, of being buried at public expense and taking one's eternal rest in the potter's field. All those feelings of distrust of man for man in the business world, the always more or less strained relations between creditor and debtor, and the constant over-anxiety about the safe keeping of property, are further expressions of the property-fear-psychosis. It crops out among those people who put their money out at small interest in some safe place instead of putting it where pleasure and benefit in a large revenue could be derived. The extreme form of this fear lead some persons to hide their valuables in ridiculous and out-of-way places, *e. g.*, in the hems of a

garment, in a bundle of carpet rags, underneath a stone, in hair combings, etc. Every one has seen or heard many incidents of this nature. One usually ascribes the hiding of money to misers, which is usually the case. But all misers do not hide money, nor are all money-hiders misers. Fear and distrust may cause even a liberal man to keep his money in his own peculiar way. Money-hiding, however, is one of the things of minor interest about the miser.

Science lacks a psycho-sociological treatment of the miser. It is true that numerous descriptions of his nature, disposition, and appearance are found in certain species of ethical literature. These descriptions attempt nothing at his origin, and are inadequate in showing his relations to society. The plan of this paper permits only a brief statement of the theories relating to his *origin* and *nature*. The subject deserves a separate monograph. The miser belongs more particularly to the climacteric and post-climacteric periods of life. He has lost interest in his species, the instinct-feelings of parenthood are dead within him, for he evades and shirks her holy ordinances. The dynamic push up of life's forces, the progress of all life is a concatenation of forces that he avoids. He steps aside when they move in his direction. He will not be caught up by them. Although the most sessilized form of the human race, his sessile apparatus is of the very crudest sort—a miserable hut or cave. He will not beautify a home. Even if given one, the marks of time soon begin to show on it. He reverses every principle of hygiené, every sentiment of home and a better part of the customs of society. Whence this anomalous sociological element? Is he a product of a morbid passion to get money, plus a morbid fear of poverty, both having become fixed ideas; or is he an individual whose nature the altruistic wand of adolescence never touched; was he truant to life's school while nature was teaching her one great lesson of self-sacrifices. Is the miser a man with a child's notion of property, *i. e.*, that property is an *end* and not a means; or may he have resulted from an enforced unselfishness and altruism in childhood, not allowing the instinct of selfish acquisition to play itself out; or may he have resulted from some mental shock, as disappointment in love,[1] loss of friends, thereby aborting that instinct of providing for one's children which we have shown is so fundamental in the normal individual? This latter theory appeals strongly to the writers as one which accounts, at least, for not a few misers. Sweep away from a man his friends, by some evil blow destroy his faith in his own kind, and leave him thus

[1] R. L. Stevenson, in his novel *Kidnapped*, gives as the cause of David Balfour's uncle becoming such a cruel miser, disappointment in love.

without a purpose, with no one to care for — what will be the result? Silas Marner was such a man. We quote the opinion of George Eliot: "Have not men shut up in solitary imprisonment found an interest in marking the moments by straight strokes of a certain length on the wall until the growth of the sum of straight strokes, arranged in triangles, has become a mastering purpose? Do we not while away moments of inanity or fatigued waiting by repeating some trivial movement or sound until the repetition has bred a want, which is incipient habit? That will help us to understand how the love of accumulating money grows into an absorbing passion in men whose imaginations, even in the very beginning of their hoard, showed them no purpose beyond it. Marner wanted the heaps of tens to grow into a square; and every added guinea, while it was itself a satisfaction, bred a new desire. In this strange world made a riddle to him he might if he had had a less intense nature have sat a-weaving, looking toward the end of his pattern or toward the end of his web, till he forgot the riddle and everything else but his immediate sensation, but the money had come to mark off his weaving into periods, and the money not only grew, but it remained with him. He began to think it was conscious of him as his loom was, and he would on no account have exchanged these coins, which had become his familiars; for others with unknown faces. He handled them, he counted them till their form and color were like the satisfaction of a thirst to him, but it was only in the night when his work was done that he drew them out to enjoy their companionship."[1]

Every human being must have something in the world upon which to lavish affection and solicitude, something to which he can turn for companionship in his hour of leisure, some end in which his labor finds reward. And if through some mishap in the economy of nature, some abortion of his own instincts he be deprived of such of these as his own human kind afford, he must turn elsewhere, and that iron handed master habit may well determine that his fate be turned into a rut of money hoarding. It was the entrance of a little child into the life of Silas Marner that transformed the old crabbed miser into the tenderest of fathers. If the child had entered his life first and passed again from it, he might in turn have become the miser. Such is the "expulsive power of a new affection," but affection there must be in every breast; an end in every life. We do not attempt to choose among these several theories on account of the small number of facts in hand. To study the miser with any degree of satisfaction both his life history and that of his ancestors should be well in hand.

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[1] P. 19. Silas Marner by George Eliot.

THE "CHILD TYPE."

By ALEXANDER F. CHAMBERLAIN.

There is something more than the poet's license of speech in the words of William Canton:

> "In praise of little children I will say
> God first made man, then found a better way
> For woman, but his third way was the best.
> Of all created things the loveliest
> And most divine are children."

For, if we believe many of the best authorities in human biology and anthropology to-day, man, woman, and the child, represent, in the order given, Nature's farthest remove from her ideal, her greatest effort to preserve it, and her best promise of what it shall one day be.

And woman, being nearer to the child, is destined, in the years to come, more and more to shape man, somatically as well as psychically, in her image, until he becomes perfect even as she is perfect.

With the passing of accidental and incidental excrescences of civilization, ideals of war, brute strength and overweening masculinity, and the ever increasing influence of the consciousness of the teleological processes of evolution in the individual and in the race, making more strongly for the ideals cherished of woman throughout the ages, there will appear a social togetherness, which under present conditions, is seemingly impossible, and a co-operation in intellectual, moral and political life which the mere superficialities of the time cannot delay forever.

Tennyson felt, even more than he expressed, the truth of this *rapprochement* when he wrote, in "The Princess":

> "Yet in the long years liker must they grow;
> The man be more of woman, she of man;
> He gain in sweetness and in moral height,
> Nor lose the wrestling thews that throw the world,
> She mental breadth, nor fail in childward care,
> Nor lose the childlike in the larger mind;
> Till at the last she set herself to man,
> Like perfect music unto noble words;
> And so these twain, upon the skirts of time,
> Sit side by side, full-summ'd in all their powers,
> Dispensing harvest, sowing the To-be,
> Self-reverent each and reverencing each,
> Distinct in individualities,

> But like each other ev'n as those who love.
> Then comes the statelier Eden back to men:
> Then reign the world's great bridals, chaste and calm:
> Then springs the crowning race of human kind."

The physical and psychical facts upon which such opinions are founded may be read in Havelock Ellis' "Man and Woman"[1]—where the feminization (not effeminization) of the modern man is discussed and the way in which woman has led and is now "leading evolution," pointed out.

Not only is civilization "measured in terms of woman's liberties and activities," as Brinton and Mason have shown, but it is also measurable in terms of her physical influence upon man, which has been immensely favored by the development of urban life, with its facilities of locomotion and transport, and its multiplicity of occupations (most of them once confined entirely to the other sex, for woman as worker is older than man as warrior) which tend to feminize man.

As Ellis notes, the "wit" of St. Clement of Alexandria, that woman might be allowed to wear shoes because "she is a tender thing, easily hurt," is now quite *passé*, along with innumerable like arguments of the "weaker vessel" sort; not that woman has become hardened, but that man, too, "by Nature's kindly law," is now "a tender thing," and distinctions of the kind in question lack point.

The city man and the college student, who enjoy the gifted company of the man of genius,—these three are the most woman-like groups in our modern populations,—are all "much nearer to the typical woman than is the savage." In the size, contour, conformation and contents of their skulls, in the delicacy of their faces, in the finer quality and better disposition of their bones, as in many marked psychical characteristics, the normal man of to-day has advanced from the constitution of the savage in the direction of woman, and he has done so because "she represents, more nearly than man, the human type to which man is approximating." This physical feminization of man can be discerned even in the pelvic region, for "the modern man's pelvis is slowly becoming more feminine." In fact one may almost turn the Latin saying round, and declare of woman's reshaping of man *omnia quæ tetigit ornavit.*

Woman has always been the racially stronger, though she has been so often stigmatized as the individually weaker, just as the child is the individually helpless, but the racially potent. The reason why, to use Gœthe's newly interpreted *dictum*, "das Ewigweibliche zieht uns hinan," why "woman leads evolution" with respect to man, is that she is nearest the child,

[1] Havelock Ellis. Man and Woman: A Study of Human Secondary Sexual Characters. London, 1894. See especially pages 390–398.

who, more even than the old Hebrew prophet dreamed, leads them both.

Woman and the child represent the most generalized forms of the human race, and Nature has kept woman nearer the child in order that, during the process of growing up, the latter might not altogether lose the fair promise with which he begins life, and that here and there a genius might be kept child-woman-like amid the mass of men who seem to approach the ape as they recede from childhood. Even among the anthropoids, the infant and the female gorilla make a mighty effort to touch the lower limits of man, from which in old age they come to be so far removed.

The women and children of all races resemble one another more than the men, the last, as they age, seeming to depart more and more from the ideal type, save those men of genius in whom by happy circumstance or favor of Nature during childhood or adolescence, the essentials of the child-type are retained and further developed, or, almost as rare, those *fortunati senes*, whose "second childhood" is not one of *retour* merely, but a perpetuation or a reflowering of the primal stock, whose glory and whose beauty dazzle us as in childhood. This true "second childhood" of the old, owing to the hurry and bustle of to-day with its youthful ambition and greed, and other noxious accompaniments of present civilization, does not, perhaps, with us, appear to such advantage as it did in the early history of culture, and as it does even now among unspoiled primitive peoples, where the old are seers, prophets, priests and counsellors. There, perhaps, childhood being shorter, "old age" is really longer, though life itself be shorter. Primitive peoples seem to have known not a little of the golden age of the race, the golden age of childhood, and the golden age of old age.

We, too, however, more wisely than they, shall in future years know them all. The decline of war, which often slays the best in the land, the amelioration of the conditions of labor, hygienic improvements which concern both physical and mental growth, moral advancement, social ease and comfort, etc., are lengthening the average of human life and increasing the frequency of "green old age" as well as extending its usefulness as a factor in human development. Sometime the real "second childhood" of the individual, which the culture of centuries to come must enlarge and make use of in ways not yet imagined, may become exceedingly beneficial to the race consciously, as his first childhood has been unconsciously. For there is a divinity that shapes both the beginning and the end of life and the mutual relationship of long-lived individuals with a long-lived race,—for we must believe that the race affects the individual, no less than the individual the race,—opens wide

the path of human evolution. With our race, there is no reason why old age should be either a desert or a swamp, parched or poisoned into uselessness. As the race has lengthened human infancy, so it may also prolong the "green old age" of man, making it childlike in the highest and noblest sense. There is enough in childhood to recast old age. Then it may be, "man's general infancy," of which Browning sings, will begin. The rejuvenation of humanity which is now going on,—represented by prolonged infancy, adolescence and "green old age" means much if rightly interpreted. Age after age men have sought the "Fountain of Eternal Youth," forgetting, as the old chronicler tells us, the wiser opinion of those who held that "this fountain was to be found in no wood or valley of the world; but rather in the eyes of children and in the strong hearts of men." Like the Kingdom of Heaven, the Isle of Bimini lies within men, not without. And through the child alone both are entered upon.

The relation of the "child-type" to the "race-type" is a very interesting problem. That the child is the ideal somatic father of the man is a view that finds considerable support among anthropologists at the present time. According to Dr. Johannes Ranke, of München,[1] there is an ideal infant type, characterized by large head, long body, short limbs, etc., proportions common to the great majority of the children of all races, the special features which distinguish the adult individuals belonging to the various races of man being due to the retardation or to the advancement of these child-marks. The most striking analogies with the child-type are presented by the so-called "Mongolian" race (with which Ranke affiliates the Malays and the American Indians), the bodily proportions of the Australians and Negroes generally removing them to a much greater distance, while the white European races occupy a mid-position.

From this point of view certain bodily peculiarities of the Negro as compared with other races, and with the child, are not *per se* theromorphic analogies, bringing him nearer to the ape, but rather "exaggerations of the typically human forms,—relatively smaller head, longer trunk, arms, and, especially, legs,—which really carry him further along the line of upward development as indicated by the progress of the individual from childhood to adult age. Ranke even goes so far as to speak in similar terms of the black color (not present at birth, and having some analogies with brownish color in Europeans), the

[1] J. Ranke: Ueber das Mongolenauge als provisorische Bildung bei deutschen Kindern. Corrbl. d. deutschen Ges. f. Anthr., Jahrg. XIX (1888), pp. 115–118.

prominent lips (certainly not ape-like), the marked lumbar curve, etc.—these are all exaggerations of something noticeably human, not peculiarities that link the "black" races closely with the ape. In some respects, on the other hand, certain cranial peculiarities, for example, which Virchow has noted, the "black" races tend to approach the child, or the female type. The European races, by virtue of certain peculiarities, the development of the face, the eyes, and, especially the nose, carry them as far along the really human road as do the bodily characteristics just mentioned the Negro. Judged by their larger head alone, the European races stand upon a level nearer to the child than the Negro, but the former's possession of a greater brain, together with their *rôle* in human history, seem to forbid the view that a developmentally low cranial form must always be associated with inferior abilities in general. Each race seems to possess something, or several things, typically human (often in excess), none possessing all of them. This is in accordance with the view of Sir William W. Turner, the eminent British anatomist, who holds, that no human race is so constituted, so far as the skeleton is concerned, as to place it in every respect above all others, nor does there exist any one race, whose skeletal characters are such as to place it, in all its peculiarities, below all other human races.[1] While, *e. g.*, the character of the skull and the pelvis in the European races remove them further from the mammifers than the Australians, Bushmen, Negroes, etc., the proportional relations of the lower limbs with the upper, of the humerus and the femur, bring the same European races nearer to the apes than are the black races generally. The Lapps and the Eskimo, who, with respect to the proportions between the lower and upper limbs, and between the humerus and the femur, are nearest to the apes of all the races of men, are, nevertheless, the furthest removed from them in the proportionate relations of the forearm and the arm, of the leg and the thigh. In the proportion between the forearm and the arm, the Fuegians would seem to be the most pithecoid or monkey-like of men, but they are very far removed from the apes by their pelvis, which is of a very high type. The Eskimo of West Greenland,—some of this peculiarity is certainly due to their kayaking,—according to Soren Hansen, while their general physical development follows about the same laws as does that of Europeans in general, exceed in proportionate length of arm the Negroes, who are usually considered the longest-armed race on the globe, and, thereby, nearest the anthropoids.

[1] Sir W. W. Turner: Variability in Human Structure as displayed in Different Races of Men, with especial Reference to the Skeleton. Journ. Anat. and Physiol., Vol. XVI (1891), pp. 473-496.

Ranke's view appears to be shared somewhat by Dr. Franz Boas, who, in his excellent address on "Human Faculty as Determined by Race,"[1] remarks: "We find that the characteristic differences between man and ape are often more pronounced in the Negro than in the white race, and we may say, with Ranke, that many proportions of the lower races are to a higher degree human than those of the white." This statement, however, he justly qualifies by observing further that the proportions of the body do not depend entirely upon descent, but just as much upon occupation."

Havelock Ellis[2] also supports in general terms the thesis of Ranke: "In certain characters, however, the adult European is distinctly at the furthest remove as well from the simian and the savage as from the infantile condition; this is especially so as regards the nose, which only reaches its full development in the adult white. In some other respects, as in the amount of hair on the body, the adult European recedes both from the specifically human and from the infantile condition, and remotely approaches the ape."

The "overlapping of variations" in the diverse races of men, is, as Dr. Boas points out,[3] "significant in so far as it shows that the existing differences are not fundamental"—the innumerable transitions existing between race and race making it exceedingly difficult to maintain doctrines of anatomical superiority. One must remember, in this connection, that use and disuse, and the "conditions of existence" under which so-called races have lived account for much and render less necessary the assumption of original anatomical differences of the first moment. The apes, too, have departed, in the course of their development, very far from the rather human character of the infant simian. The tropical environment of the African and the temperate *milieu* of the Caucasian have also had their influence. The relativity of the whole matter is enhanced by the fact, upon which Dr. Boas, as noted above, lays stress, namely, that within a race itself changes and variations in the proportions of the body,—these really vary from race to race comparatively little,—may occur as great as those observed in the diverse races of men. Such, *e. g.*, are the differences in proportion types between soldiers and sailors, and the rapid changes noted in college students under the influence of the gymnasium and physical training. Functional causes, operating during childhood and after, result in difference of structure.

[1] F. Boas: Human Faculty as Determined by Race. Proc. Amer. Assoc. Adv. Sci., 1894, pp. 301–327. P. 309.
[2] *Loc. cit.*, p. 24.
[3] *Loc. cit.*, p. 308.

The anthropometric records of the war of the Rebellion showed[1] "that sailors had legs as long as those of the Negroes, and, correspondingly, a shorter trunk, while their arms were equally as long as those of the soldiers of the army." Dr. Frank Baker,[2] in his able discussion of "The Ascent of Man," observes: "Between the lowest and most brutalized laborers and the cultivated and intelligent classes there exist anatomical differences as great as those which separate the white and the Negro." And the causes operating to produce such difference have been much more potent among primitive races and in the early periods of the existence of the civilized races of man, where, as Dr. D. G. Brinton has pointed out,[3] many variations and abnormalities, by some authorities to atavism, and styled "theromorphisms," "simian traits," etc., are clearly due to deficient nutrition and malnutrition. Nutritional conditions account, in part at least, alike for the diminished stature in the poor districts of France, the dwarfishness of the Lapps as compared with the Finns, and a host of defects of bony structure in all parts of the skeleton. Dr. Hrdlicka,[4] from a comparison of the measurements of Worcester (Mass.) school children with those of children of the New York State Juvenile Asylum, as to length of trunk and of lower limbs, comes to the conclusion that "it is possible that it is in the lower extremities where lies the principal defect in the growth of the badly nourished children. As is well known, the lower limbs of the new-born infant are very short, and for some time these limbs grow proportionately more than the body. Nutritional disturbances at this period cannot be without some effect upon the part of the organism in question.

This influence of food, or lack of food, is strikingly noted by Dr. Baker,[5] when he says: "Savages, when ill-fed and living in unfavorable conditions, may simulate the habits of anthropoids, and this has an effect upon their physical structure, yet not on that account should we too readily accept their close relationship." Very interesting for comparison here are Nehring's[6] studies of the effects of "cram" and "starvation" upon the skulls of swine, in which the refining influence of good and regular food is very noticeable.

Food-conditions, doubtless, account in part for the conflicting statements of travellers concerning the physical condition and

[1] Dr. F. Boas: *Loc. cit.*, p. 310.
[2] F. Baker: The Ascent of Man. *Amer. Anthrop.*, Vol. III (1890), pp. 297–319. P. 319.
[3] D. G. Brinton: Variations in the Human Skeleton and their Causes. *Ibid.*, Vol. VII (1894), pp. 377–388. P. 383.
[4] Ann. Rep. N. Y. Juv. Asyl., 1898, App., p. 40.
[5] *Loc. cit.*, p. 319.
[6] Biol. Centralbl., Vol. VIII (1888–9), pp. 237–240.

appearance of savage peoples. Thus, the records of the French scientific expedition to Cape Horn, inform us:[1] "The Fuegians are not the ugly, ill-proportioned beings that travellers have represented them to be. Like most short races, they are rather thick-set, and the head appears disproportionately large. The question of nutrition has great importance in relation to their external form, and natives, who, in a state of semi-starvation, had a lean, repulsive look, acquired surprising grace and even beauty of outline after a period of good feeding. This was especially noted in the Fuegians who were taken to Paris." The difference between a "lean year" and a "fat year" is very marked, especially in tribes of limited area and resources. Primitive man, in this respect, is often twin-sufferer with the modern child of civilized parents. To the effects of good food, more sometimes even than to that of fresh air and change of environment, are to be attributed the betterment and improvement of the physical condition of children brought about by the "outings," "summer trips," "vacation colonies," etc., which, since, the initiative of Pastor Bion,[2] of Zürich, in 1876, have spread over all the civilized world,—in Denmark even "winter outings" have recently been instituted. The general tendency of these "outings," the length of which varies from a few days to several months, is, judging from the reports of Varrentrapp and Bion and the scattered fugitive literature of the subject, to increase the weight and refine the general physical appearance of the boys and girls more than to attempt the task of adding to their stature, although the latter is sometimes notably affected.

A quarter of a century ago Dr. Fritsch,[3] in his thoroughgoing study of the natives of South Africa, emphasized the influence of civilization upon the bodily characteristics of man, which resulted, sometimes "in but a single generation, in important modifications of the more external racial characteristics,"—differences which, according to Dr. Boas,[4] "are quite in accord with the differences between wild animals and domesticated animals; and we all know how far-reaching the influence of domestication may become."

Civilization, for man, means more or less regular work, with a sufficiency of reasonable food, and these are accompanied by a rapid improvement in the musculature and general fullness of body, besides such development in particular of special limbs or organs, as certain forms of labor and exercise inevitably entail. Fritsch points out that the shoulder and pelvic girdle

[1] Amer. Anthrop., Vol. V (1892), p. 92.
[2] Zum 20jährigen Bestand der Feriencolonien. Zürich, 1896.
[3] Die Eingeborenen Süd-Afrikas. Breslau, 1872.
[4] *Loc. cit.*, p. 309.

do not among wild tribes (even with respect to individuals), as compared with racial type, reach the same degree of perfection found among those under the influence of civilization. Hartmann,[1] who has studied the North African tribes, confirms these opinions, and other observers have contributed their quota to the evidence which sustains the declaration of Fritsch[2] that "Members of aboriginal tribes in the neighborhood, and under the influence of civilization, attain the best possible development of body, particularly with respect to general rounding of form, development of musculature and skeleton, and, above all, in facial traits." Girls, especially (when of course, the evils of white society are kept from them), benefit very greatly by this contact, for, with their own people, life is hard and they develop early, and as quickly fade. The portrait of a Fingoe girl, for example, grown up as a child-nurse among the whites, shows when compared with her wild fellows, "a softer, more rounded form of face, absence of the dull, wild expression, and an unmistakable stamp of intelligence,"—changes, which, to a less extent, the portrait of a Fingoe man also exhibits. With some justice Fritsch[3] warns against taking for typical aborigines natives who have passed their lives in direct contact with civilization, who have been brought up from childhood in the houses of the whites, or in the missions, still more those who have grown up not in their own country but in other lands, amid similar surroundings and influences. For even upon the adult savage such influences have their effect, while upon the growing child they work unceasingly to round off the sharp corners of the body, and to light the face with the soul of a more expressive intelligence. Special forms of labor work changes also. The Fingoes (Kaffirs), *e. g.*, who carry loads through the surf at Port Elizabeth, in Cape Colony, who have grown up on the spot, have a development of the forearm and the calf of the leg often superior to that attained by the natives who have preserved their primitive character, with whom the upper arm and the thigh are the parts more strongly developed in relation to the remaining musculature.[4]

If we believe M. Gauttard,[5]—but more evidence is needed to settle the point,—since the occurrence of the revolution of 1868, when the Japanese people began in earnest their rapid acquisition of western civilization, some surprising changes in the national type have occurred. Many Japanese children born now-a-days (not *métis*) have neither the flat nose of their ances-

[1] Die Nigritier. Berlin, 1876.
[2] *Loc. cit.*, p. 125.
[3] *Loc. cit.*, p. 239.
[4] *Loc. cit.*, p. 20.
[5] Rev. Scientif., 1897, p. 569.

tors, nor the marked yellow tint of skin; the so-called "Mongol eye," and the prominent cheek-bones are also often absent. On the other hand, however, many children of Europeans born in Japan are said to have lost the rosy color of their skin and to have acquired the "Mongol eye." This question of the uplift of primitive peoples towards the highest type known among civilized races and the alleged reversion of civilized peoples, long resident in a given habitat, towards the type of the aborigines of the region, is one which needs careful study and investigation.

Civilization and food are powerful factors in shaping the bodily comeliness of men as they have always been. We will not say with the German philosopher, "man is what he eats," because, here as elsewhere, the inevitable *plus* enters, and man is more than he eats. And the child, above all, has been favored by progress in food-getting, food-preparing and food-assimilation,—vast is the difference between the child of cave-man and the child of the well-to-do urban resident to-day, and the difference between the adults of these two epochs is incalculably more. Mr. H. H. Bates[1] has pointed out what a vast influence upon humanity the invention of the culinary art has exerted, making men fit to survive, rather than improving them merely by the survival of the fittest, as is the rule among the lower animals. Indeed, by ameliorating the necessities and the difficulties of food-getting and food assimilation, and creating leisure, the art of cooking, stimulated the ideal of the beautiful in man, and caused the æsthetic arts largely to precede the industrial. Not hunger, as the Latin poet has it, but its satisfaction, was the first master of arts. The constancy, regularity and nutritiousness of the food-supply among peoples on the road to civilization has, in fact, made it possible for the child to live his childhood without growing old too soon, or losing that race-genius by virtue of which he shapes his kind. Indeed, as Morgan[2] intimated, the pastoral and agricultural states, which seem to lie at the basis of all the civilizations of antiquity made possible the rich development of man which followed, by providing fit and nourishing food for him during the early years of his life. But this is not true of all civilizations in the same way, those of the New World in particular. There other factors, among them the altruism-creating power of the desert, from which ancient Israel, like the old peoples of New Mexico and Arizona, and the old Peruvians, drew so much, were at work. As Prof. W. J. McGee observes,[3] "in desert regions,

[1] Amer. Anthrop., Vol. I (1888), p. 143.
[2] Ancient Society, N. Y., 1878. P. 25.
[3] Science, Jan. 14, 1898. P. 54.

the tendency of common strife against a hard physical environment is towards the development of co-operation and interaction, which simulate the altruism of civilization." Here, too, the weakness of the child gains the sustenance without which it could not survive, and without the domestication of animals which has meant so much in Aryan and Semitic civilization, other peoples have thus reached a culture that sometimes touches the best of known civilizations past or present. Nature has not been limited to any single device in her effort to provide the environment which should favor the "child-type."

The striking resemblances of children among all the races of man, seem to indicate the origin of all mankind from one primitive stock, while the remarkable physical similarities between the young human and the young simian appear likewise to demonstrate in the remoter past, a common origin of the human and the anthropoid groups. Heredity in all its forms, accidental variation, influences of cosmic and social *milieu*, natural, sexual and social selection, race-intermixture, etc., with other as yet unknown factors, besides the little understood influences of individuality and character, have had their share in the formation of those peculiarities which remove the individual adult from the type of his childhood and the various races of men one from another.

As exemplified in the so-called "higher races," while specialization and variation have been very great, the sexes, as was seen above, are now entering upon a progress by *rapprochement*, the magnitude of which may be estimated by comparing the statements of Havelock Ellis[1] and Dr. Marina[2] that the pelvis of man is becoming more like that of woman, with the declaration of Dr. Brinton:[3] "In spite of much that has been written about the fœtal traits and undeveloped and semi-pithecoid characteristics of the female skull and skeleton, I will challenge any anatomist to determine sex where the pelvic bones are absent." There is exaggeration here, no doubt, but much that is significant. For, if we eliminate (in comparing the city woman and the city man of to-day) all the peculiarities that are distinctly due to the fact of woman's being smaller physically than man; there is, indeed, little absolutely divergent left, save the primal sexual differences, which, however, fail to mark the skeleton as thoroughly as they do the living individual. And to some extent, a similar argument applies to the smaller races of man as compared with the excessively large products of more recent, and, perhaps, somewhat abnormal, conditions,

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[1] *Loc. cit.*, p.
[2] G. Marina: Studi Antropologici sugli Adulti. Torino, 1897. P. 37.
[3] *Loc. cit.*, p. 379.

for there is something in the fact that Nature has always weighted the intellectual balance (so far as individuals within a given civilized race are concerned) in favor of the dwarfs rather than in favor of the giants. This, together with the fact that woman, "whose faculty," as Dr. Boas remarks, "is undoubtedly just as high as that of man," has had, probably for all time past, a skeleton rather smaller than that of man, must make us not lay too much stress upon the alleged growth in size and strength of our race as a whole, which has probably been an incidental, and not necessarily a permanent or significant development.[1] Sometimes Nature overshoots her mark a little and has to retreat gracefully.

The white European race, which has recently been the subject of an elaborate monograph by Prof. W. Z. Ripley,[2] is not, in all probability, one of the earliest human types. That it is really one of the latest, Dr. Boas[3] thinks probable from "the high degree of variability, the originally small distribution of this type, and the apparent tendency of hybrids with other races to revert to the other parental race rather than to the European race." The peculiarities of type now noticeable throughout the European area may be due, not so much to mixture of races, as Dr. Ripley holds, as to variations within the race itself. As Dr. Boas says, in criticism of Prof. Ripley's views: "In early times this race was probably slightly specialized in a number of areas, each area exhibiting a considerable degree of variability. The loss of pigmentation and change in facial form, were not equally pronounced everywhere, so that one region would be darker colored, or broader faced than another, although not by any means uniform in itself. For this reason the occurrence of blondes or of narrow-faced and elongated heads in an otherwise dark, broad-faced and short-haired person, does not necessarily prove mixture." These peculiarities may often be nothing more than "the remoter variations from the prevalent type. The most generalized form of the European race is represented by the child of white civilized peoples, and, not so closely, by the woman of those peoples. The European child itself, for the race, as we have seen, is practically a young one, stands, as Ranke suggested, in certain relations to the Mongolian type of mankind. Indeed, to use the words of Dr. Boas, we may consider it "a highly specialized form of the Mongoloïd type, from which it departs principally by the peculiar development of the nose and adjoining parts of the face and by a general decrease of pigmentation." The

[1] *Loc. cit.*, p. 315.
[2] W. Z. Ripley: The Races of Europe. N. Y., 1899.
[3] Science, Sept. 1, 1899, p. 294.

"smile that was child-like and bland," for, which, among other things, the "heathen Chinee" has been said to be "peculiar," humorously locates the Mongolian in the company of the child. A comparative study of the Mongoloid type, physically and psychically has yet to be made. It is a significant fact, however, that many of the best ideals of the race, love of peace, toleration, respect for learning, sobriety, industry, etc., are marked characteristics of the Chinese, for example, and their nobler development has only been hindered by foreign domination, inter-tribal disputes and the ultra-practicality, which the necessities of their situation seem to have involved them in. As their culture aged they seem to have drifted away from the genial childlikeness of its beginnings. The *naïveté* of the whole people is illustrated, as Dr. Brinton[1] notes, by the little use they made of important discoveries: "They were acquainted as early as 121 A. D. with the power of the magnet to point to the north; but the needle was never used in navigation, but only as a toy. They manufactured powder long before the Europeans, but only to put it in fire-crackers. They invented printing with movable type in the eleventh century, but never adopted it in their printing offices. They have domesticated cattle for thousands of years, but do not milk the cows nor make butter. Paper money has been in circulation for centuries, but the scales and weight still decide the value of gold and silver, coins of these precious metals being unknown."

The Chinese represent one child-like type that has reached civilization, and, if it be true that the European child, physically, is only a specialization of the Mongoloid, the story of the latter's achievements must gain new and varied interest for us.

Half way between the Chinese and us there arose another civilization, that of Greece. Concerning the Greeks Mr. Galton,[2] with reckless exaggeration, however, informs us "the average ability of the Athenian race is, on the lowest possible estimate, very nearly two grades higher than our own; that is about as much as our race is above the African negro." Just as we see the childlikeness of the Chinese, so the Egyptians saw that of the Greeks. As Havelock Ellis[3] remarks: "'You Greeks are always children;' such was the impression given by the ancient people whom we are taught to regard as the highest type the world has reached." And the saying of the priest of Isis and Osiris was as true as the more hardly earned *dictum* of the modern scientist. Not alone the genius of the individual, but that of the race as well is childlike—the achieve-

[1] D. G. Brinton: Races and Peoples. N. Y., 1890. P. 200.
[2] Hereditary Genius. P. 331.
[3] *Loc. cit.*, p. 391.

ments of the great ones, and those of the great many recall the child. And the chief virtue of the civilizations of the future will be their seeking to restore and to preserve that childlikeness by admitting into culture-partnership, in the deepest and broadest sense, her, whom classic civilization failed to develop, and of whom Chinese civilization made an honored toy. Monastery and nunnery, bagnio and brothel must disappear ere the real age of enlightenment achieves its best. A sense of beauty that deifies the prostitute, such as Greece knew, a domestic *régime* that tends to dehumanize her as China knows, could never produce the highest type of civilization. Israel did more for the world than either, when, as Zangwill epigrammatically puts it, she sought and taught "the beauty of holiness rather than the holiness of beauty"—it was from Israel that the World-Child came. And the work of the child is not done yet, nor that of his surrogate, woman. In the words of Havelock Ellis:[1] "When we have realized the position of the child in relation to evolution we can take a clearer view as to the natural position of woman. She bears the special characteristics of humanity in a higher degree than man (as Burdach pointed out), and led evolution in the matter of hairiness (as Darwin, following Burdach pointed out), simply because she is nearer to the child. Her conservatism is thus compensated and justified by the fact that she represents more nearly than man the human type to which man is approximating."

The study of the "child-type" really includes the consideration of sex, genius, civilization in their most human and highest aspects; and how complicated the problem is, and what care is needed in its investigation, the facts noted in this brief essay amply demonstrate.

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[1] *Loc. cit.*, p. 392.

NOTE ON EARLY MEMORIES.

By G. Stanley Hall.

Most of the first fourteen years of my life were spent upon several farms in the hilly region of Western Massachusetts. This home I revisited during all vacations of my course at the preparatory school, college and professional school. Nearly every summer since, when I have been in the country, I have reverted to the region for at least a few weeks, and still retain possession of one of these old farms. Here I have given free vent to a number of fads. One summer I walked up and explored in rubber boots all the stream beds within a wide radius of Ashfield village; collected and, with expert help, labelled all the stones and rocks I could find. Another August I devoted to flowers, grasses and ferns, collecting about one hundred species of the latter alone. One season several weeks were devoted to climbing the hills, naming them, and marking directions, counting church spires, and tracing with the aid of a local antiquary nearly one hundred miles of old stone wall in town which marked the early partition of farms. Once I amused myself by tracing glacial scratches in the rocks and exploring the terminal moraines. Once, with an old lumber wagon, I drove around and asked every one I knew to let me explore his attic and thus collected about seven hundred objects: from old looms, spinning wheels and primitive plows, to calashes, shoe buckles, pewter plates, foot and bed warmers, ancient school and hymn books, home-spun frocks, pitchpipes and such other mementoes of ruder days as those with which Mr. George Sheldon has filled his most fascinating museum at Deerfield. These are now housed and catalogued in the basement of the academy building, where on Friday afternoons they yield a very modest income to the janitor who is allowed to charge ten cents to all who desire to visit the collection. Another August I questioned old people concerning local history, visited sites of the old mills, cellar holes, apple orchards, and made out nearly two dozen family trees which show the sad decadence of this sturdy old Puritan stock.

A year ago last August, however, I undertook as a vacation diversion a more or less systematic exploration of all the farms I had ever known, noting on the spot everything remembered from early boyhood. I climbed in through the windows of abandoned houses and explored them from roof to cellar in

quest of vestiges; sat alone sometimes for hours trying to recall vanished spots and to identify objects which I knew must have once been familiar. Thus during the month I noted between four and five thousand points, sometimes revisiting the same scene to observe the effects of recurrence, and from it all I gathered some general impressions of memory quite new to me, which it is the object of this article to record.

Farm I was where I was born and where the first two and one-half years of my life were spent. It contained about one hundred and twenty-five acres of very diversified land and although I had often driven past it) little of it was seen from the road), I had not entered the buildings in all that time, so that nearly fifty years had intervened. I was allowed by the present tenant, who had occupied it ever since we left, absolute freedom within doors and without, and spent there many hours, note book in hand, at various times. Often, as *e. g.*, while gazing eastward toward a dense swampy forest, where even yet an occasional bear or deer is killed in winter, or when coming upon cherry trees near a ledge or visiting two large rocks beside which were two old maples, a feeling that I thought to be a glint of vague familiarity was experienced. On coming to a knoll upon a vast heap of stones near trees I found myself articulating "why yes, of course, there was something like that." On coming upon a bit of woodland with many large dark stones near the house this feeling was very strong, and I was suddenly reminded of an older girl cousin who seemed somehow lacking and due there, although I have no recollection that she ever saw this farm, yet on general principles she probably had. Several experiences of this class suggest to me that association is deeper and more indelible than conscious memory. So with the rocky end of a knoll came an almost imperative association of cows being milked by a woman. The present occupant stated that the barnyard used to include that point, and I have been told that our hired man's wife used to milk. There was a very faint suggestion of a discontinued lane from this point to the pasture, which I am told did exist. The sudden smell of catnip, the gloominess of an old wall of very black stones, a deep well beneath the kitchen, the abundant and peculiar moss on the ledges, were other things that brought a distinct sense of familiarity but no trace of anything like memory. A deep wild gorge to the west of the level road, although quite hidden from it; the stumps of three old maples on the east some distance from the house; the slight slope of the front yard and that of a neighbor's with a well-house, vaguely suggest reminiscence, but it is more a feeling of a strong and peculiar interest than any identification with past experience.

The only clear and distinct memory connected with this place, which I have always carried and often revived, is of a red upright wooden spout with a wheel attached, through which I poured water, and which to my great grief was left behind when we moved. As an older boy I used to question my parents about it, but they seemed to have forgotten what it was. I rummaged the attic and shed, and finally found two red water spouts fastened together to which an old reel wheel had been nailed, thus triumphantly vindicating my memory.

Thus out of all the very many objects and incidents that were impressed upon a child's mind during the first two and one-half years of his life, almost nothing was definitely recalled. The inside of the house which was changed but little; a few vestiges of old furniture in the attic which we were said to have left; the long shed entirely unchanged; the barn; all these things abounding in objects of absorbing interest to childhood, time had almost completely obliterated. Yet knowing well and having experienced delusions of memory I am positive that I cannot be mistaken in the repeated sense of reminiscence upon coming upon some of the features above noted. Phrases like "why, so it was; yes, to be sure," in some cases almost came to spontaneous vocal utterance at first, while in others, sitting and gazing slowly developed this sense. It was a hazy kind of beyond-the-woods feeling or a stony-hill-side impression with an emotional tone of effort to climb it, and repeatedly with a strong desire to sit an hour or two in a spot to enjoy the rapport that I felt would come. Occasionally when I sat thinking of something very different or reading a book I had brought along, automatic side associations seemed to spring up. It was certainly not like other places, and it differed from them more than by the knowledge I had that I once lived there and any expectant tension that fact might generate. I have little doubt but that if I had met that ensemble of landscape features unexpectedly in some far country I should have been struck by some reverberations of reminiscence perhaps akin to those Plato connected with a previous state of existence. The points of contact between my mind and the past at least did not take spacial form, but were upon such general impressionistic items as the gloomy blackness of the wall, the dreadfulness of the dense spruce and hemlock woods in the east, the difficulty and perplexity of the stony and rocky places, the upward and downward slant of the small hills. The outdoor impressions were far more cogent than the barn or house or anything in them, and up and down directions of the rolling ground evoked a reaction so peculiar as to suggest that the experience of going up and down hill for a child of the age I was when that was my home left a lasting impression.

These observations at any rate have raised in my mind the query whether or not experiences of that early age distinctly tend to lapse to vague and evanescent emotions. The influences of the environment at this very formative and plastic age of rapid brain change must have been great, and I cannot but believe that my psychic organization would have been quite different had I passed this period of my life upon a prairie. It may be that remote ancestral phylogenetic influences are related to such nebulous psychoses of memory somewhat as they themselves are related to the clear, detailed, conscious impressions arising from recent experience. Indeed we may opine that such vestiges may be the forms which our experience takes just as it is fading from consciousness and sinking below its threshold into the larger unconscious life, where instinct and the heart, which from their unfathomable depths dominate so much of our lives hold their sway. Thus it is perhaps, Weissmann to the contrary notwithstanding, that the experience of the individual tends to transform the race, somatic cells to affect germ cells, so as to determine the psychic disposition of offspring. It is at any rate not impossible that hereditary vibrations are simply yet more vague and shadowy than this all but lost psychic or neural stratum of my own soul, which faint as it now is must have had a high determining value.

Perhaps an opposite theory is truer. At that stage I may have been a creature of sentiment, and sense and feeling may have been closely related. The emotional tone which colored all impressions may have been the organ of experience and there may have been no change in the psychic processes or even the nerve and brain cells, which meditated the experience of these years, but the later mentality of maturity may have simply grown over them, and the traffic of mind and life have followed these newer strata. In this case the vague impressions I had were recrudescences of baby stages of mind or what was undecayed of them, and there may have been none but a relative change in their position on the scale, if such there be, that separates reproduction from conscious individual experience.

Certain it is that I had here a rare opportunity in the very salient and permanent features unvisited during all the interval to look for conscious reminiscences. But to make the experiment absolutely conclusive I should have been brought up to believe that these years had been spent on one of two or more very different farms, each of which I should have explored to find which was the true one from those effects of expectant tension and peculiar interest which have always centered about this place, the effects of which under such circumstances have never been measured, and could not have been eliminated.

Farm II where I lived from two and one-half to eleven and one-half years, I have driven by perhaps a dozen times since I left it. The house was almost immediately removed, as were the trees near it, and everything was smoothed and grassed over, so that where it once stood is now an open mow-lot. All the outbuildings, including barn, shop, shed, and stable, remain almost entirely unchanged. Once or perhaps twice in the nearly forty years since we left it I have walked over the farm a little, but in my study of these places I spent a day, note book in hand, zigzagging systematically across it from end to end save perhaps in the more densely wooded parts, hardly a square rod of ground escaped observation. Of nearly eight hundred items noted I am quite sure that at least half have been in my mind in some connection since. In the case of most of the rest the faintness of the reminiscent sense tend to confirm my impression of no such intermediate revival. The most striking experience of all was on coming suddenly upon a wild rose bush in a pasture near the house, which somehow affected me profoundly and actually evoked tears, and something almost like a sob for some reason utterly unaccountable. I could not possibly recall anything definite about it except that it somehow very closely suggested my mother and brought up later the image of her looking out from the front door up the rugged pasture hill, where it stood. I fancy that it was this very bush that my automatic imagery used to associate with her singing "The Last Rose of Summer," which always seemed to me very pathetic; but, although I have racked my brain since, I can recall nothing else.

A distinct class of impressions are those which at first sight I vividly remembered with a sense of a very long interval since their last recall. Among these were, for instance, a peculiar flat white rock against which I was fond of glancing stones to see them strike fire. Another large squarish stone in a brook beneath which I caught my largest fish in a most peculiar way, and with a pin hook at that; a slight bend in an elm which otherwise I remembered very well; a rectangular stone sluice at the entrance of a little causeway; the strips of ash bark on the beams of the barn; a large knot-hole through which swallows entered it; the peculiar tan color of the boards as they approached the eaves; two large piles of stone near a stone bridge; some curiously weathered ledges; a peculiar branch in a beech tree in the woods; the shadows of the sun shining through the beeches upon ferns at a certain spot; an old tree, the roots of which diverged long before they entered the ground; a large white rock in the wall at the remotest corner of the pasture shaded by an immense beech;—oft repeated experiences, such as coming to a peculiar curve in some woodpath; a rise or fall of the ground; a hollow or a knoll; a bend in the little stream; patches

of brakes and polypods, elders and sumachs; these and other impressions like them glowed up vividly in memory. The larger features of a diversified landscape are probably the most permanent forms of all topographical memory, but here again slight elevations or depressions in the ground seemed to be almost indelible. I could never have recalled them in the sense of active recollection, but when presented to sense, I remembered them with great certainty and detail, as indeed I did many peculiar knolls in one part of the farm where these abounded, and not a few of the best holes for both fishing and swimming in the large and small brook which flowed through it. I estimate that upwards of four score individual trees in the ten or fifteen acres of woodland and in the orchard were definitely identified, as were the many groups of spruce, hemlock, willow, and white poplar. One knoll strongly suggested wintergreens, and on going to it there they were. Another damp place in the edge of the woods brought to mind jacks-in-the-pulpit some time before I got there, and there too they were, though without any sense of ever having seen them there before. Pausing at familiar spots and striving to bring up associations with their salient features rarely brought anything so vividly to mind as what was presented to sense, but there was often a feeling like the glint of partial or possible imagery as though perhaps there had been many associations which had become too felted together to be disentangled. Places near the house were, of course, best known. Those near the two roads, that nearly quartered the farm, and near the footpaths, driveways, and woodroads came next. Rocks and stones in these, and indeed everywhere, are the sheet anchors of this kind of memory, as they do not change. Special and somewhat exceptional features are what evoke and start reminiscent imagery, and when these were lacking I have sat long studying places I once knew most intimately, but have been unable to recall anything.

Another class of memories among the most vivid of all were those associated with the strong instincts of play and its incidents. Very many square rods of ground where I had mowed and raked I could recall nothing of, while another no better marked spot shone out like a star of the first magnitude, as a place where I had caught a mink, built a willow booth, slid in winter, learned to skate, pushed over my little brother, had a long fight after school with another boy; made my first effort to smoke; built a bonfire; played fox and geese in winter, etc. Over and over again this moral: that work is forgotten and things interesting remembered recurred, although this rule, if such it be, is not without important exceptions. If I remembered where I shot a crow I recall just as well where the hired man hit me with the ox whip. I remembered where I found a quarter in

the road, and remembered quite as well where a team was for some time stuck in a snowdrift near by, which I helped the men dig out. A ditch, a bit of stone wall that was built, a sugar-house, changes in the cellar, the stable, several new tools, the new sleigh, buggy, robe, harness, and scores of other such things associated more with work than with play seemed to stand out almost as vividly as the new sled, the new suits of clothes and hats, little pleasure trips, etc.

Another group of reminiscences, if such they may be called, were moods with no definite picture. A kind of open glen in the woods, for instance, recalled nothing, but gave a very extraordinary and unwonted sense of pleasure and of previousness. A big dark rock, which I must have known intimately, gave a very substantial impression of frowning stability unique in its emotional tone, and to which I seemed to owe a certain power of appreciating moral steadfastness, although my memory could only say "perhaps a rock was here." The distant sight of a group of hemlocks suggested that they were striving to conceal something, and this gave them a kind of secretive character. A large widespreading beech that stood alone brought up a unique feeling of large and benignant generosity. The angle of the woods against the sky in one place, behind which the sun used to set, evoked with much force a sense of being restrained, limited, shut out from something very much desired. On entering the woods from the open lot there was a sense of being on more solemn ground with an old feeling of awe and hush, of being shut in, of low-toned vague fear with indefinite expectancy. The note of a wood thrush very familiar there, which was heard again, never vibrated so deeply. The view of the house as it used to be, and the open lot beyond, had an almost human expression of smiling invitation that always drew me like a magnet. The noises of the brook, where it parted each side of a large stone and then paused in a deep dark spot under the willows, gave a sense of hurry and rest very pleasantly contrasted; while the brook always had strange drawing power, and kept saying "come and play with me." An old sash with small window panes, in one of which was a peculiar air bubble, instantly revived a whole series of frost pictures that I used to watch with great interest when they were very elaborate in the morning and as they gradually melted away, always beginning in the upper middle of each pane, and letting in the view without. The scenes we used to fancy and even draw in the frost, and the zest with which the rain was watched with a kind of hedonic narcosis, as it trickled in lines of broken drops against these panes, have left their marks upon my soul. I believe that I could fill a volume with descriptions of things, processes, and incidents connected with this place. The new

and striking generalization of all the study here, however, was that the physical features of this old farm had such amazing power to play upon my deeper sentiments and emotions. The buttercups, clovers, and many flowers and plants,—all had psychic qualities and definite expressions; so did the clouds, the rainbows, the rising and setting sun, the moon, the stars, particularly Orion and the Dipper, the noises of the wind, etc. Love, pity, deep dislike, fear, religious awe, aspiration, juvenile ambition, directly stimulated by the excelsior motive of hill-climbing, and every shade and color of joy and sorrow, pleasure and pain, seemed to have been brought out by the items and incidents of this environment as a skilled musician evokes all the possibilities of his instrument. I deem it fortunate to-day that I was exposed to such impressions, and hold that all the advantages of city life and of better schools would have been too dearly bought by the sacrifice of these. The country is the child's heaven, and every child ought to spend as much of his life as possible under the influences of nature; and I doubt if there has ever been a better school of infancy than the old New England farm in its best days.

Very many of the objects in this place retained the very vivid associations with the imagination which they used to have in boyhood. A dark closet with no window always seemed a little awful, because it was associated with Bluebeard, who here slew his wife amidst a lot of dead ones. A spot near an elm in the pasture, otherwise unmarked, was where the demon in the Arabian Nights escaped from the bottle. A steep acclivity in the mow land with rocks and scrub trees was Bunyan's "Hill of Difficulty," and a boggy place in the cowpath was the "Slough of Despond." Moses lay amid the bulrushes behind the willows just below the dam. Understanding that an altar was a large pile of stones, I pictured Abraham about to slay Isaac near one in the east lot, and no experience of my real life is more vividly associated with that spot. Not seeing very many pictures, I made them, and the features of this farm were the scenic background and setting for many an incident and story. Everything read to me was automatically located. Miss Southworth's stories, which I conned furtively in "The Ledger," all seemed to have been laid out on this farm, with the addition of a few castles, palaces, underground passages, dungeons, keeps, etc. In a school composition, I parodied Addison's "Temple of Fame," using local personages and events, and there it still stands in all its dazzling marble magnificence, with its spires, bright shining steps, streaming banners, minarets, massive columns, and a row of altars within, on a hill in our pasture, which in fact is drearily overgrown with mullen and brakes. The "Sleeping Beauty" was just behind a clump of

hemlocks. Under a black rock in the woods was where the gnomes went in and out from the center of the earth. My mother told me tales from Shakespeare and I built a Rosalind's bower of willow; located Prospero's rock and Caliban's den. Oberon lived out in the meadow in the summer, but could only be seen by twilight or in the morning before I got up. There was a hollow maple tree where I fancied monkeys lived, and I took pleasure in looking for them there.

After a gun was given me, I peopled all the brush and trees with small and even large game. One spot of brush was a jungle, going past which I held my weapon ready to shoot a tiger quick, if he should spring out suddenly at me. On one tree I once saw a hawk, which I fired at from an impossible distance, and toward which I always stole up for years after, hoping to find the same hawk, or if not that, an eagle, or just possible the great roc itself. This gun was perhaps the most effective stimulus of the imagination I ever had, for it peopled the whole region about with catamounts, wolves, bears, lynxes, wild cats, and a whole menagerie of larger animals; made me the hero of many a fancied but thrilling story; took me over a very much wider area of territory and helped a sort of adventurous exploring trait of mind, which I think on the whole may be favorable to originality and independence. Moreover, it gave me some knowledge of animals and their ways, prompted me to make a trunkful of stuffed and otherwise prepared collections of the meagre fauna of that region, and although it perhaps did not teach me much natural history, it gave me what was better for that stage — a deep sympathy with and interest in animals and all their ways, which now quickens my interest in the psychology of instinct. Although it aroused a passion for killing, which is anything but commendable, it may have stimulated the very strong reaction of later years, which now makes it almost impossible for me to give pain to any animal.

In another group perhaps may be placed revivals of things long since entirely vanished — an old hollow log here, a rock long ago blasted away, the details of every room in the long since demolished house, the garden, especially its more permanent features, the vanished orchard, etc. In many such cases the environment has brought up the missing thing so vividly that were it installed into objective reality just as it was, I think little correction would be needed. Yet, on the other hand, there are a number of items of vanished things which I had entirely forgotten, quite as prominent as these and as closely connected with my life, which have been furnished by my sister, but are now so well incorporated in my memory plexus that they seem to be reinstated just as securely and naturally as those images which I had preserved without aid.

Another feature was the element of personality about certain objects, which the faint traces that I am now able to recall show that it must once have been very strong. Three white stones in the buttress of a bridge, with no resemblance whatever to a face, always gave me the impression of being pleased, satisfied, contented, and constant. A large window in the barn was broad and smiled forth its good will upon all passers by. A tall slender young tree near the house seemed inspired with ambition to mount as high as possible and to exercise guardian and protective functions. A sharp steep hill a quarter of a mile away in front seemed to frown, threaten and repel, but an open flat, which extended still further up by the brook side, invited and almost beckoned us to walk up it. A crooked tree seemed tense, dissatisfied, unhappy, and another with low branches always invited us to climb and took pleasure in having us in its limbs. When the wind blew, this tree talked to us and we patted it. The horses, sheep, cows, pigs and hens, all had individual traits and character and many of them had names I even now recall. Some were feared, others hated, and yet others loved; while some possessed only indifferent qualities. We were never alone when in their company, and there was always a relief, especially if it was a little dark, in finding them in the pasture. One whole chapter could be written upon the celestial experiences; the peculiar sunsets which invited us or suggested the Judgment Day; the storms of rain, snow and hail, with thunder; the wind with all its notes and noises in the trees and down the chimney; and especially the clouds with all their peerless schooling for the imagination. Everything conceivable almost was seen in their forms and they contributed even more than thunder to give a sense of reality above.

Some of the objects upon this farm which came home very distinctly to the mind, I believe were of things I never had directly in the focus of attention but were known in indirect thinking as automatic side activities. Often when meditating on a subject or intent upon a strong experience of pleasure or pain, I used to catch my mind at a totally irrelevant perceptive process and would almost ejaculate the word "by" the window, tree, or whatever object this latter process concerned. This was a unique and oft repeated experience, and I cannot with confidence explain the connotations of this word that spontaneously came to designate it. It was when an alien impression was injected into a train of thought and perhaps when two disparate psychoses were contemporaneously in the mind. I think the "by" meant "halloo" clock, post, or whatever it was, "you are thrusting yourself upon a train of associations where you do not belong," unless by way of a kind of punctuation or cross-association.

Retracing the same path and also carefully rethinking all that it suggested, step by step, often brought out a new crop of memories. All these from this or any other source needed but very little effort to be fixed. Indeed on reading over my note book items, I find not only little help from it, but I can generally go beyond it and add new points. Hence comes the impression that were I to spend some weeks on the old places new impressions would continue to arise. Almost everything had a mnemonic value and during how many repetitions this fecundity would continue, it is impossible to tell.

Again all the distances seemed less; the hills were smaller; the effort of walking above the woods and to other extreme points of the farm was not so great as at the age of eleven or twelve. Perhaps part of this is due to a rather robust muscular habit that has grown wonted to considerable exercise and to much longer walks, but I am inclined to think a part of it must be explained as due to a development of larger space experiences which made the whole place seem small. Eye-minded impressions have in my sedentary life grown yet faster than motive impressions. The general outlines and large relations and directions of things rarely needed reconstruction. Envisagement mainly filled in details and revived old memories. "Yes, there was a tree here, a nutting place, a cow path, blackberries, a curious stone there, this was the old door hook which it is a certain pleasure to rescue from entire forgetfulness, the same old stone wall half torn away remains." The pleasure in making these identifications was so strong as to prompt me to wish to buy back the old farm, build a study and work here; or perhaps to read, think, or even write at different places giving the mind some opportunity to wool-gather and letting revery have a long line, partly to revel in the pleasure of revival and partly from a feeling that one could do intellectual work here with some special advantage. Do such revivals link the present and past in a sanifying, useful, or tonic way? Do they strengthen the corner stones of the mind and soul or ought these ruined memories to be left to fall away, while mental energy is devoted to more serious work in later adult years? Would the revivals of such associations not tend powerfully to correct some types of slowly supervening insanity, if the soul was sound when these impressions were first knit together? Wherein consists the surprising memories of the ups and downs of such curving ground? Is it primarily retinal as, of course, the larger features must be, or is it partly seated in the centers innervating the leg movement of running over or up and down it? Is it really advantageous to carry such permanent topographic maps on the brain, scrappy, dog-eared, blurred and

half effaced as they are, or is the fascination of these ruins the charm of decay?

On the whole I find most of my sister's memories cluster about the house, where they are detailed and minute, while my own are much fuller of the farm. On the whole I was perhaps even more surprised at what I could recall than at what I could not. Memory seems more permanent than anything else on this place, save the general features of the landscape. Wash-outs have exposed some rocks and sunk others; little forests are beginning to grow up and part of the old one is removed; man has levelled, cleared away, filled up, put up and destroyed buildings and walls, but memory remains true to its past.

Of the educational value of the inventory of my impressions of this farm, it is hard to speak. The deeper things like the discipline of toil, the pleasure of rest and recreation, the seriousness of religious experience, the communion with nature; — all these did their work and moulded the soul, but have left few pictures. Very many of the latter are concerned with items which might have been very different with little obvious change in evaluation. The memories of this period, while very numerous and distinct, may have less emotional tone than the obscure and uncertain recrudescences on *Farm I;* and yet very frequently strong impressions of father, mother, brother, and sister would return with pathetic emphasis. There was here a distinct and all pervading sense of sadness that all was gone and forever past recall; and yet, when I frequently asked myself whether on any conditions I would be put back as a child and live it over, I was able to think of no conditions on which I would consent to any such repetition. What then is the origin of this peculiarly sombre hue of the "days that are no more?" It is surely not all because we know they might have been better lived, nor is it because maturity has not still greater joys than they, nor yet again all because pleasant impressions abide and painful ones are forgotten so that blessings brighten as they take their flight. Childhood is the paradise of the race from which adult life is a fall. Childhood is far more generic in body and soul than even woman, just as she is more so than adult man. The "shades of the prison house" are the inevitable specializations necessary in becoming a member of the community, and I am quite clear in the opinion that the fascination which the memories of a happy childhood always exercise upon the mature mind is due to the dim sense that in those halcyon days we were more complete and all sided, more adequate representatives of the race. The other charm seems due to the sensuous life of childhood, which is all ear and eye, curiosity, interest, which devotes all its energies not to a bitter struggle for existence or the intellectual working over of impressions, but surrenders

itself with abandon to the impressions themselves. This and, to some extent, the next farm were my earthly paradise, and although in the current that has long so strongly impelled young rustics toward more urban centers I have wandered and fallen far, I hark back to all the old local associations in these spots with a piety that is almost filial toward the very trees and rocks.

On *Farm III* I spent a number of months each year from eight to thirteen. It comprised some four hundred acres and joined several others with which I became quite familiar, as they were owned by relatives. Of one abandoned house into which I climbed, I still preserved a distinct memory of every door and window, could have drawn the rooms and replaced most of the furniture. The interesting revivals, which I am sure could not have been in my mind for decades, were details like a peculiar door knob with a defect in it; a cross beam in the kitchen with a peculiar pattern of paper which I discovered by tearing off two later superposed wall-papers; several peculiarities about the cellar stairs; a white stone in the wall of the well; a hollow in a door step; a bullet hole in a shed; and many others of the same kind. Often I was at first uncertain about these, but they generally soon grew clear. In one room there was an almost imperative association of collective prayer, a quilting bee; in another of a baby in a cradle, a young lady and her beau sitting on a black hair sofa, but there was no trace of any reminiscent feeling, although each of these items quite likely were really experienced. Still more dim are fragmentary images of people sitting around · of some one in the morning coming out a side door, rarely opened, to pick flowers; of something exceptionally good to eat; of something else very interesting kept on the stairs; of some curious kind of an animal in the sink, etc. Of the arrangement of the rooms upstairs, where I often slept, I could recall nothing whatever.

Another once familiar but now abandoned house into which I climbed produced like this a tangled mesh-work of memories, which seemed to interfere with each other, so that when I often thought I had found a clue, it was hard to bring definite images above the threshold, but there was a vague massive feeling of reminiscence that was overpowering, full of interest toned with both pleasure and pain. Here I unexpectedly came across an old school seat and desk which I would instantly have recognized from the old school-house. A broken hearth of an old stove had a striking pattern which shone out with great vividness, and which my eyes as a boy used to be very fond of tracing out in revery, and I instantly recalled just how it stood in another house. A lot of rude abandoned sap tubs from which as a boy I used to help make maple sugar, and the general patterns and

certain individual tubs were clearly remembered. A very antique chair, bottomed and backed with woven strands of braided colored rags; an old stool which my grandfather often used in lying down; the broken part of the colored glass of the old clock; the funny snapping apparatus of an old reel; the knot which made a defect in the cheese basket; a curious red salting box; the door of a cat hole also with a curious knot in it; a blind window; a crack through the broad hearthstone; a discolored spot in the ceiling; the mark of my knife in the woodshed door; the one imperfect brick in the back of the fireplace; —these things suggested to my mind that objects, rarely and perhaps never in the exact focus of consciousness, but about which day-dreaming and absent-minded revery no doubt played a great deal, constitute a large factor of such memories. Irregular forms like knot holes and exudations of gum, especially from spruce boards, imperfections in bricks, corner stones, clapboards, unsymmetrical trees, were convenient perching points for the flitting imagination, and perhaps points *de repère* for quite elaborate structures of fancy, like the ink blotches of the psychophysic laboratory. At any rate I doubt if such objects as these were ever the centers of so concentrated attention and so much or so long continued interest with me before.

Passing to the house of *Farm III*, itself temporarily closed, but with some of the old furniture still remaining, and through every room of which I slowly went alone, note book in hand, memories crowded very thickly with the opening of every new door, and seemed almost to affect the vividness of sense impressions. The old parlor paint never looked so white, the castellated old stove, almost never used except on Thanksgiving Day, was still there; on this side lay my grandfather and here my aunt in their coffins; the old mirror with its wide mahogany frame still had the little crack in the corner, which was even better remembered than the mirror itself; the smaller long narrow one with its gilt and black frame and the gaudy flowers painted in the glass of the upper part; the red table which still showed my ink spot on it; the old daguerreotypes; the carpet; wall paper; mahogany sofa; the same old black books, Clark's Sermons, Baxter's Call, Bunyan's Holy War; the yellow boards and the maple cane-seated parlor chairs; the large-figured red carpet; the curious bulge in the post of the old mahogany stand with its two yellow drawers with their two small mahogany handles each; the big red pin-cushion built on a broken glass lamp stand—were well remembered images in this room unvisited for at least thirty years. In the sitting-room, where far more time was spent and which had been frequently revisited in the interval, I could not do as well, although I was able to jot down over seventy partial memories of scenes and events

connected with that room. Occasionally things I had first thought new, like the stone floor of the cellar, the place of the various bins and cider barrels were later remembered. Here trifling things almost flashed back, which I cannot think had been recalled for decades, such as a peculiar latch fastening; curious round-turned curtain holders; a milk stool with block and peg identified by a knot; a very old-fashioned green, black and red wagon; a large and curiously broken rock in the pasture wall; a cracked and worn-out ring in a discarded ox yoke; a four-sided razor strop, red gum in one end and the handle broken; a few square yards of very stunted little daisies back of the barn; the same old woodchuck holes almost always in the same places.

Some associations experienced very vivid revival. On entering the cellar, the first thought was of a pitcher of cider I had fallen with and broken; the next of an old apple parer; the next of a relative, I had often heard of, who long ago fell down the stairs of the old house and broke her neck; then of a musk rat I once caught at the mouth of the cellar drain; next of the peculiar flavor and look of three of my favorite apples, one of which was of almost delusive intensity; the rows of barrels of apples with a slightly purple tinge; of something very curious that once happened out doors and which I saw through the cellar window, but the very nature of which I could not recall; of another something exceptional that once stood for a long time on the east side, and of something that hung from a cellar beam at a pretty well located point, but whether a hanging shelf, cupboard, dressed pig, or a cask of home brewed beer, I could not recall, try as I would; the front window event may have been getting in potatoes or apples, clearing out the cellar, shovelling snow away to let the light in, a game, or a team driving up with company. The spacial reference was definite but my brain functions here are in a state of unrestorable ruin, for they enabled me to mark nothing but the site, where once something stood, suggesting a prepotency or rather a prepermanence of site location.

In wandering over this rocky, hilly and very diversified farm, almost every square rod of which had features all its own, my note book was rapidly filled with the flotsam and jetsam of reminiscences. Sometimes the outline of a hill or a whole perspective glowed up, but more often it was some insignificant detail or incident. There was a spring once piped to the house and later to a tub near by, annually cleaned, which I knew well, with the trodden cattle path to and about it in winter and its cooling draughts in haying; but the brightest memory was of a story I had heard that once a dead musk rat was found in it. Here was an old wall with a high shady rock cracked a foot in

the middle to which I carried the nine o'clock baiting to the half dozen men, who had already swung their scythes in unison for three hours, and who here paused fifteen minutes to drink water with vinegar, molasses and ginger and eat the thick quarters of apple pie. In one corner as a boy my grandfather had told me he saw a bear; here he caught a coon; there grew the fever plants; there was a stony acre overgrown with poison ivy which I loved to travel barefoot to show my immunity; two cellar holes rich in interests to a boy with woodchucks, squirrels, lilacs, birds' nests, apples, and a little brook running through its garden corner where I made a toy saw mill that would cut potato boards; there was a small hill thickly strewn with heavy white quartz boulders; a rocky corner famous for raspberries, another for thistles and yellow birds; a beech crowned hill where the three species of woodpecker abounded; the lightning ash tree; adder tongue knoll; lightning rock; the wintergreen and running pine places; the strange isolated rods of rank Texas blue grass; the sugar house nearly a mile from everything with all its rich associations; the many cows, calves, horses, oxen, and pigs, whose individuality is still preserved; the large pond, now a meadow, with many incidents of fishing, swimming, skating and trapping; the solitary sheep barn, which, populous as it was, needed to be visited only once a week; the half dozen barns I knew so well, and which in the winter when they were full of poultry and stock were so full of interest; the places where soap, shingles, cheese were made; the butchering and hunting incidents; the long and dreadful Sundays with my grandfather's tedious stereotyped prayer, the slowly approaching close of which was so welcome; his mighty bowl of milk; the weekly dressing of his hair, braided very elaborately up over his bald crown; my making of complete palm leaf hats; my crude skill at the accordion; flageolet, fiddle, bones, double shuffling; my soprano performance at the singing school; the details of sheep washing, shearing, breaking colts; quilting, husking, apple paring, road mending bees and raisings; the kitchen dances Thanksgiving; the Thursday evening prayer meeting in the old schoolhouse; the two dozen herbs in the garret for medicinal purposes; fence mending, road breaking, laying in wood; the stories of the winter choppers by the fireplace; the long discourses of one of them to me after I had gone to bed about the impending second coming of the Lord; several new buildings; the tearing down of an old house which I knew well till five by frequent visits, but of which nothing whatever remains except the memory of a funny old wooden latch with a string through a hole:—such lists which could be greatly extended showed me plainly that starting from such centers and working

along association tracks as I sit in my study afterwards may be quite as prolific for the period represented by this farm as reiterated personal visitations and efforts of recall made on the spot.

In meeting schoolmates of these and later days, I am often struck with illustrations of what I believe to be a general law, viz., those who finished their education at the district school retain far more vivid and detailed incidents of school life up to that period than those who go on further. In reunions of classmates of high and fitting schools, who ended their education at this stage, I find that their memories are more copious and retentive than mine. Those who stop at college, and again those who end study at the professional school without subsequent graduate or university study at home or abroad,—all illustrate the same principle, that each advanced stage of schooling tends to obliterate memories of the preceding stage.

With regard to the utility or mental hygiene of persistent efforts at revivals like the above, which may have involved something we can figure as regenerative tensions of decadent structures, it is clear to me that such interests are for the time a most salutary kind of diversion from the overwork of a year. The distraction seems wholesome, but if carried too far it may tend to diminish the vigor of later acquired interests or knowledge, and help toward the puerile tendencies often seen in senescence. Such memories as these probably linger latest amid the declining functions of extreme old age, when later attainments are first swept away. Much ought to be forgotten and the very neural structure plastically wrought over into new shape. Too great persistence of juvenile impressions may retard mental development, and too much accretion of such barnacle like traces of experience may distinctly handicap the upward push of the soul toward an ever more complete maturity. The psychology of forgetting is in the main yet to be written; perhaps the Wagnerian Parsifal, who at the dawn of manhood was able to recall almost nothing whatever of his early life, represents a more normal type than most of us, or at least than I do. If Spencer's conception of memory as instinct in the making be correct, such recollections are the crude material of higher powers, which have undergone arrest or abortion on their way. They are the unutilized remainders of our culture. Is there after all any value, when I have a distinct experience of envisagement with some of these objects with all the pleasure that attends it, in the attendant sense that I have envisaged it before?

On this farm my boyhood memories seem most distinct and numerous, although I was less familiar with it than with *Farms II* and *IV*. This was in part due to its greater size and

diversification, the larger number of persons and activities going on, but also I think in part to the fact that my stays here were intermittent, usually only a few weeks at a time, so that experiences here became less monotonous and there were more of the intensifying effects of novelty.

My note books abound in associations of taste and smell, both of which are very fecund. Caraway brings back vividly to me anywhere the soul of my experiences with the Puritan Sunday church services, and the three distinct kinds of cookies which I should instantly identify anywhere. The sight, smell and taste of catnip is a whole plexus of feeling rather than distinct memories of my aunt, mother, the white and yellow bowls, my drinking of it sitting up in bed for a cold, etc. So peppermint, spearmint, the taste of the yellow birch bark, the life everlasting, the sweet flag pods, slippery elm, the new grown raspberry stems, the so-called cheeses of the little barnyard plant, beechnuts, the medicine made of cherry twigs, the taste of certain apples known nowhere else, the smell of pennyroyal, the barnyard, the breath of cows, of corn silks, new mown hay, brakes, freshly turned sod, burnt over pastures, spruce gum, the varnish smell of the coffin shop, the odor of pines, the taste of maple sap, sage, sorrel — bring up strange uncertain poems with quaintly accented emotional tones which suggest that the latter are perhaps the accumulated mould of long past years of intellection, the felted debris of vanished experiences, the stratification of past ages of life deposited in layers. I attended to many auditory impressions to which I sought to give opportunities of revival, when they seemed peculiar to this stage of my life. The sound of the brook in certain places; the tones of the wind blowing through trees, especially pines; the song of several birds rarely heard since childhood; the whistle of the woodchuck; the drumming of the partridge; some peculiarities in the thunder at one house on a high hill; the calling of cattle of the different species; the aspirated screech of the henhawk; the bubble of the sugar pan — all these showed again the close association of sounds with feelings.

On *Farm IV*, where we moved when I was eleven and one-half years, and which was my constant home for nearly four years and my intermittent home ever since, my systematic exploration began on one of the pleasantest morning's of early autumn, with the sky a perfect blue, with a wide horizon of hills stretching from fifty to seventy miles, and some twenty-two shades of green as I thought distinguishable in the landscape. These one hundred acres I own and have a great piety toward, and I would not part with them for many times their very modest value. From

nothing I ever possessed do I derive such helpful and sanifying influences, partly because it is land and partly because of its associations. I have plowed or mowed, made fences, ditched, harvested, or followed cattle over nearly every foot of it. When worn out with work, worry or grief, and sometimes if ill, I have gone to this farm, contact with the broad surfaces of which has never yet failed to speedily set me up. I own it, and it owns me in a sacred and unique sense. Just as now-a-days those who ride behind a horse with a coachman do not know it as did those of old who rode on it, trained it, hunted and slept with it, owed their lives perhaps to its speed, and so owned it in an unique and individual sense; so I own this farm, in a way, too, that refutes at least in one sense the argument of those who advocate public ownership of land. The rooms of death, the almost absolute stillness that now reigns here; the old awe and vague dread of the evening gloaming, which I have lately re-experienced, bring a sadness so sicky sweet that I can hardly tolerate it—and yet it all has after all a wondrous charm. What too are the psychological sources and what are the stages in the hereditary development of that strong passion to improve land, never so fervent and dominant as in the early periods of New England? Whence this rancor against forests and brush that even yet forbids us the comfort of roadside shade or the beauty of roadside growths? Very rarely in the history of the world has worse soil been cleared of brush and stones and made to yield a tolerable income and supported a more stalwart or intelligent race. To come upon a decayed stump where once was a familiar tree was a little like finding on a grave stone the name of some old acquaintance who was thought to be still alive. I climbed several old trees with the branches of which I was most intimate when a boy; got on to roofs I used to frequent; crawled under the barn floor; squeezed into the hollow trees in quest of memories.

I spent a number of hours here carefully studying and making notes on two inches square of ground chosen almost at random, counting each blade and root of each growth, distinguishing last year's dead from that of the year before; watching the ants of at least three species; slowly penetrating with a magnifying glass into the soil, noting the different forms of sand-grains and fine pebbles; tracing out the ant hole, and also coming upon a white grub; going through the shallow mould where was an angle worm, as a representative of the species through the body of which Darwin thinks this mould has often passed, to the red sandy earth beneath, and realizing what a rich book could be written on all that those two inches square contain. Up in the woods and grove I believe I could distinguish with eyes closed the poplar, pine, beech, and perhaps other trees, by

the noise of the wind through them. Perhaps I had better make my confession complete. During the days on this farm I soon gave up wearing my hat, for it shut off the view above and obstructed the sursurrus of forest music, so that the ears had a freer feeling without it. Soon the coat came off, for the heat, then the vest. The collar was hot and sweaty and was loosened. The spirit of boyhood was on me, and I suddenly preferred to carry my shoes and stockings in my hands. There must have been forty kinds of feel and tickle to the feet in the various rough and smooth rocks, sand, clay, hot and cold bits of roadway, diverse species of moss, grass and stubble, in the puddles and brook, the leaves and pine needles; so that I not only revived memories of barefoot days, but realized what an important surface of contact man loses and by how many stages he is removed from nature by shoes. As I was sure to be alone I concluded that pants only, and those rolled to the knee, would be enough and to spare. The contacts of leaves and brush and the sun that burned my back may have been intoxicating, but however it was, I finally several times enjoyed the great luxury of being in complete undress, and of feeling pricked, caressed, bitten and stung all over, reverting to savagery as I had often done as a boy by putting off civilization with all clothes and their philosophy. It was a curious experience of lightness and closeness to nature. Without the shoes one is let down half an inch in stature; the center of the gravity of the body is lowered; there is a sense of lightness; and I often had spells, sometimes I think an hour or more long and quite spontaneously, of singing, yelling, and many kinds of vocal gymnastics that sustained and perhaps intensified the peculiar kind of nature communion, philosophy and reminiscence to which I gave way on this spot, where I revelled in the rankest and most absolute freedom with a kingly sense of ruling as well as owning. Here I may mention incidentally that I am a faddist on hill-climbing, because it exercises the heart and lungs so much neglected in sedentary habits, and exercising just those movements most natural and healthy, gives a sense of overcoming and surmounting with a peculiar exhilaration on every hill top attained, with a sentiment of victory in the doing, of breadth and exultation in the end, besides enabling one to straighten out the axes of eye muscles and accommodate for a distance.

On and near this farm are many hillsides and many curious terminal moraines, almost terraced by cow paths. In one place I crossed sixteen in present use in about eighty paces, and there were many more in all the stages of disuse. In moving to or from feeding grounds, cows go in files and are marvellous engineers to avoid going up or down steep places. In and out went the scarped serration of the declivity, and right and left

wound the cow paths for perhaps one-third of a mile, occasionally deviating for young growing trees, nearly trebling the distance in order to maintain almost a water level, passing spots so precipitous that a false step might have been fatal, and altogether constituting a curious manifestation of instinct.

This farm has been so often revisited that renewals of undoubted boyhood are fewer and harder than elsewhere. A curious crack in the upper right corner of a window pane was always one of the most striking things in the house, perhaps never directly in the focus of attention as a boy, but I found I could draw a complete outline of its rather complex figure, which I used to find myself tracing hundreds of times. Every room visited now, some after a lapse of but one and others nine years or more, had a memory tone more or less distinct and all its own. The most archaic memory stratum was the attic, an old shop, a bin, and a quarry hole where rubbish had been dumped for many years. These I carefully explored, especially the latter, which I dug up layer after layer, coming upon older and older reminiscences with increasing interest and zest. Under ashes I found old carpets, broken crockery, things clean and unclean. I came upon now a bit of china, a piece of a stove, tool, bed quilt or carpet pattern, which shone out with diverse kinds of memory phosphorescence, each richly set in emotional tones and knit up with more or less complex associations or ramifications. Here I found a rather suggestive analogue of my memory strata, for things had been dumped here once a year at every house cleaning from the first, and the organization of its material was about as slight, and the stages of decay were about as marked and progressive as in my mind. In a chest in the old shop were fragments of a foot and hand warming soap stone from which irradiated an idyl of decayed memories of my mother, the stove, sleigh rides, etc.; a scrap of blue cotton reins from an old harness shone up brightly from a great depth and were very well recalled after a very long interval; some curiously notched harrow teeth; a carpenter's gauge; a rude but worn out whetstone of rare virtue; the lock of my old gun; a paper of sheep redding; two powder horns which I made and ornamented; a cake of oil meal once in high favor for calves; a much admired pair of martingales; the strangely formed iron step of a cart; the brass nibs of my little scythe; a red cherry rolling pin; a corn scraper; many broken antique cast iron wrenches; the hatchel and wire foot spool used in domestic broom making; the six-inch needle; leather hand thimbles and black thread and broom press, with the paper of gold leaf for the handles; a set of well marked wedges for splitting wood; the iron head beetle, identified by a peculiar gnarl; the battered seat of the old buggy, with its white broadcloth cushion belted in by a

patent leather strap; two door fastenings; part of a sled I made; several traps for rats and woodchucks; a jug of woodchuck oil, and a whip lash of its skin I braided; a trowel, bullet moulds, ornamented harness, my old buzz-saw;—most of these surely cannot have been warmed up in my brain for several decades. Other things which had the same air of resuscitation, but which had been so open that my mind has no doubt flitted over them in my annual revisitations, but which it was a great pleasure to revive more definitely, were quite a list of stones, rocks, fences, wood paths, wild grapes, cattle; my marks in the barn and shed; the crowded contents of old shelves and cupboards, which I carefully re-explored; the curious painting of green and white spatter work on the floor of a room carpeted ever since we first moved into the house; and here again suggesting a whole psychological treatise were door knobs, latches, hooks, leather hinges, wall paper, and graining, often in the foreground of memory. The curious little arch over the window of a very unfrequented room; the strangely figured paper on the rarely used fire-board; a knot hole in the front of a chamber door; an unfloored place in the attic where there was perennial danger of stepping through the lath; a long unbroken corner of a stove door; some blue bread we ate, an aborted product of our own wheat field; the figures on the old blue crockery; my place at table; several dress and bed quilt patterns; the little red and lettered cup; my penny banks; a curious old firkin;—of a good many of these I could write a brief treatise were I to characterize all the incidents and especially the feelings which they brought to mind. Here, too, in comparing my note book with a list of things my sister younger best remembers, I am yet more forcibly struck with the great superiority of a girl's memory of house, garden and yard, and a boy's of the farm.

In reviewing this memory furniture, many questions arise. As a boy I used to rake, pitch, chop, dig, and am fond of more or less of these same activities now. Do I get more rest and refreshment from these restorations of boyhood activities than I should by rowing or indulging in new games that involved different activities and laid the chief strain on different muscles? Is it a correct theory of rest and vacation to thus restore old habits or does it tend to reversion in a way that makes progressive growth harder? Again the temptation here is always great to utter abandon and absurdity, and to seek restored equilibrium from an overworked sedentary life with much brain strain in it by what might almost perhaps be called the silly or giggle cure. Does one rest any supernormally developed activities by exercising the subnormal weak ones? Is there here the material for a real new cure in a psychic restoration of the old joy of life characteristic of childhood?

Another chapter might be written on hill experiences. One distant summit I had never climbed since one day in the early teens, when I had spent a good part of a whole Sunday there alone trying to sum myself up; gauge my good and bad points till I found I had been keyed up to a kind of Jeffrey rage, and walked back and forth vowing aloud that I would overcome many real and fancied obstacles and do and be something in the world. It was resolve, vow, prayer, idealization, life plan, all in a jumble, but it was an experience that has always stood out so prominently in the memory that I found this revisitation solemn and almost sacramental. Something certainly took place in my soul then, although probably it was of less consequence than I thought for a long time afterward. My resolve to go to college, however, was clenched then and there, and that hill will always remain my Pisgah and Moriah in one.

Again a hill is a good dynamometer. Many years ago I began every summer to climb a distant hill and get back to the hotel, from which I started as speedily as possible nearly every day at five o'clock, and noted the time and have kept my record these many years. From my teens to the present time, I can walk rapidly on the first heat just about so far before my breath and legs become uncomfortable, and I want to pause. This is approximately a constant and has not varied perceptibly in all these decades. For a long stretch of hill climbing, however, the case is very different. Training decreases my time much. Beginning last year with one hour and a quarter, at the end of a month I could do the same work with about the same forcing in forty-nine minutes. I hope to keep this record yet many years, and although it will be sad when the inevitable senescent diminution occurs, the curve may have a little interest.

A wide gamut of pleasure and pain is experienced in a remarkable way. When I walk to the old place from the hotel a mile away on a bright morning, the joy of seeing everything is very intense, indeed to the point of exhilaration and almost intoxication. As I wander about all day, take my dinner alone on the hill and continue the peregrinations of the afternoon, the pleasure very steadily becomes less exquisite, pales and declines. Sunset is sad and the gloaming becomes oppressive, while as twilight darkens to early evening out of doors and night comes and I go to bed alone in the house, memories of the past grow almost insupportable, and old fears which sometimes haunted my boyhood, but have been unfelt since, of ghosts, robbers, and even of sudden death or fire, delay or even banish sleep. My euphoria cannot hold out against night and solitude here. Nowhere else have I experienced these ancient fears in any such force, although I have been no less alone.

Several times, first on a dark stormy windy night and last

on a bright moonlit one, I undertook to wander through the village graveyard, which is some distance from any house, but met with utterly undreamed of difficulties. As I approached it, there was a depressing sense of loneliness which darkened down to a strange kind of fear. I found myself tense, anxious, expectant of something painful before these apprehensions took any form or had any object. Then I thought of ghosts and kindred wild scenery, that made me always as a boy run by this place after dark. As I forced myself to climb over the black fence under the pines and to touch a few of the nearest grave stones, the nervous awfulness of it all increased. I paused to gather courage and lit a cigar on the nearest tomb stone, forced myself along a rod further, paused and felt great tension. Had there been need, I certainly could have gone through or spent the night there alone, but each time I retired simply because it would have taken such a great nervous effort to have forced myself on. I dread great heights, but can climb almost anywhere, just as here the tension of the neuroses is painful and wasteful. This experience suggested to me many problems. The old fears were not of very vivid imagery of sheeted figures, etc., but the fear without an object was intense. Whether this was ancestral or caused by the many gruesome tales of childhood or both, it is impossible to tell.

In an old yellow chest I found carefully preserved all my compositions from the first at the age of five on "The Rat" up through various contributions to the unprinted school paper and a kind of valedictory at the age of fourteen, together with several juvenile diaries which I was encouraged to begin at the age of seven. I also succeeded in finding again about all the old school books from the little red primer up to the "village reader," Webster's speller, Colburn's and Adams' arithmetics, Mitchell's geography and atlas, the first grammar, etc., all of which I have carefully looked through, together with quite extensive files of letters of my parents written to me from fourteen on when I began to be away from home. Of this mass of material the most striking fact is how much has been forgotten. The reader was in use for years, and yet I marked only fourteen selections of which I had any recollection. Several of them I recalled memorizing, but beyond the first few lines or verse or two there is only a general feeling of familiarity. The poetic extracts linger longer than the prose; of the fourteen I doubt if more than five have been distinctly in my mind since boyhood days. The great majority were utterly unfit for childhood, and I can recall nothing whatever, but it is always those that were best liked at the time that are best remembered. The speller is most familiar. Nineteen or twenty of the lists of words as they stood in columns (lady, baker, shady), I could still repeat if started.

Many of the illustrative sentences, too, like "fire will burn wood and coal," came back with great distinctness. Clearest of all, however, were the fables in the back with the pictures, and next the abbreviations; but the three pages of laws concerning sounds of letters in the front and rules of punctuation in the back, memorized with such tediousness and unintelligibility, only had a faint echo of familiarity. Now from a perfect understanding of what they mean I could memorize them with approximate verbal accuracy in a very short time. It is curious that the order of disconnected words the same in sound and varying only slightly in spelling should be so much better remembered than coherent sentences, which were interspersed. This, I think, shows the very phonic nature of juvenile memory. Of the geography the pictures were by far best remembered, especially those of men and animals in action. All the scraps about the productions, the fragmentary history and population, have gone, and most of it would be now valueless. The general outlines of the colored states was generally remembered, but I could now easier prepare for an examination in a new science than on this farrago. I read through the shorter catechism and recalled the relation and sequence of the sonorous words, and remembered particularly the crabbed places in the stiff and awkward sentences which were so antistylistic, and yet this at the age of nine I knew by heart, teste a diploma to that effect still in my possession signed by the minister, superintendent and class teacher. Of Colburn's arithmetic, in which I was rather expert, the most striking recollection was of the symmetrically ordered lines arranged like poetry. Of the Adams' arithmetic the tables of weights and measures stand out clearest, and next a few specially hard sums, and the rudiments of some of the ponderous rules, together with certain scenes of the schoolhouse (blue slate, blackboard, and teachers) that were associated with them. Of the primer the bright and scarlet cover was best remembered, next the pig sentences, and some of the alphabet pictures. In language work Green's grammar and analysis brought back little that was vivid or pleasing. The ponderous mouth work of the latter (adjective element because it describes a quality according to rule 17; of the third class because it contains a subject and predicate according to rule 23, etc.), looms up through the fog of years. By far the most vivid of all were the school declamations, various sentences of which could be recalled.

The case with my own effusions was quite different. Almost everything here came back in a sense. The favorite topic of my earliest productions was animals and fights. Occasionally, at a very tender age, I lapsed into poetry which was very rich in promise of the bathos of later freshman and sub-freshman

effusions. My two chief endeavors were to be either funny or eloquent, and it is hard to reperuse these efforts without sentiments of self-pity, and they are a most drastic lesson in humility. The diaries, sometimes kept up at the rate of a few lines a day for a year or more at a time (occasionally I would write up on Sunday all the space for each day of the past week), are mostly very monotonous records of the weather, going to school, but quite frequently with specific events, most of which recalled nothing whatever.

Near the dawn of adolescence, the spring after I was fourteen, I conceived it would be vastly fine to write my own life, and this was spun out to some forty pages of foolscap. It is fullest on school life and events. Nearly every term of the preceding eight years of school life I had had a different teacher, over twenty in all, and each of these is described and in order. This convinces me that a great body of details of early life remembered at fourteen lapse later, for I could not now recall even the names of all these teachers, still less their order. Most of the leading events bring up a sense of recollection, but nearly all the minor ones have been swept away in the stream of time. At this age, too, being an ardent admirer of Silvanus Cobb and Mrs. Southworth, I wrote a story of some eighty large pages and in ten chapters. This was read with what I was led to understand was the most eager interest, chapter by chapter, by a younger girl cousin, but by no one else. I have made several attempts to read it morning and night, when rested and fatigued, but it absolutely will not read, and my mind balks at early stages and I have not yet been able to get half through it. This same year I also made an inventory of all my secular music and catalogued eighty-seven pieces that I could either sing, play, or both; but the tragic pity of it all is the quality. Of most of these pieces I could now whistle or strum the air, in some the rhythm seems intact, but the words are in various stages of decadence. Especially do I recall the secret day dreams I had of being a great musician, orator, literary man, poet, etc. Strongest and perhaps most vividly remembered in all this group is the perfect craze for clog dancing and its various steps and shuffles, together with playing on the bones.

This period of my life, and not before, is marked by the beginning of a coherent and sequent memory. From this time on I can give some account of at least every year of my life in order, and although I can do this to some extent before, most of it is both transposed and too full of gaps. My present life really began here, so that whatever has happened since seems far more a part of myself, and what preceded, despite the filmy links of personal reminiscence, is more objective and as if it were of another person. That a child of twelve months has certain

memories of experience of the preceding week or month, there is every reason to believe. Mr. Colegrove[1] thinks males best remember protracted or repeated occurrences, and females single or novel ones, and holds that there are different kinds of memories that culminate at different periods of life. I cannot, however, think that I remember clothes, tastes, foods, playmates, friends, special pains or pleasures, accidents, or exceptional incidents better at one time than another. Mr. Colegrove's memory curves all show that early adolescence, and particularly the fourteenth and fifteenth years, are on the whole richer in memory material than any other period of life. Probably the years from twenty to thirty come next, as important changes are then occurring. On the whole I think pleasant predominate over unpleasant memories in my life. During all these earlier years, there was no epoch making event like the death or any severe sickness of a member of the family.

Finally, there was every degree of readiness of recall. Some revivals seem purely spontaneous with no external suggestion. Others (the old weasel hole, the mill wheel) came back instantly and clearly upon envisagement. A spot of deadly nightshade was recalled quite clearly, but its personal equation was much slower. A flock of yellow butterflies at a certain spot in the road was dormant for some minutes, but gradually came out with great distinctness. A large bunch of unknown white berries in the woods I slowly came to believe quite surely I had known as a boy, but in other cases the reminiscent sense supervened very slowly and perhaps was not quite clear till the next day. Other objects I must have known well gave no glimmer of reminiscence.

I am able to recall several cases in which I have attached to my own memory continuum alien matter that has been told me and which after having long believed to be a part of my own experience, I was obliged to confess never could have been. Such experiences give me some little charity for those of my theosophist friends who talk and write of the memory of past births and describe their own previous life in the Lost Atlantis, in ancient Greece, when they heard Homer, or when they shouted for Cæsar or Brutus in the Forum, or think they recall with great vividness the items of some particular event that happened to them thousands of years ago with many Lethes of birth and death intervening.

On the whole, painful as have been many of the revivals in this preadolescent past, there has been a preponderance of pleasant impressions. While this does not show that pains

[1] Colegrove, F. W.: Individual Memories. *Am. Jour. of Psy.*, Jan., 1899, Vol. X, p. 228.

tend to fade and pleasures to survive, because we have no complete inventories of each, it nevertheless comforts me with the sense that on the whole my boyhood was preponderantly a joyous one, as it ought to have been. Finally, the act of recall itself has, I think, in every case had a certain unique kind of pleasure attached to it. I close this all too scrappy note with the feeling that if I were only able to write a complete autobiography of my own childhood and boyhood, reflecting all of even its more typical experiences as they actually were lived and felt at the time, restricted as it was in both nature and circumstances, so that it should be a complete history of all the stages of evolution of even one limited conscious personality, it would be a book second in scientific and general interest as well as practical value to almost no book ever written.

AN EDUCATIONAL EXPERIMENT.

By GEORGE E. JOHNSON, Superintendent of Schools, Andover, Mass.

Many public school teachers, within the last few years, have come to believe that the play of children has an important and practical significance in the work of the schools. Men and women interested in social reform, workers in university settlements, in boys' clubs, and among the young people of certain church communities, have drawn more or less largely upon the play and games of children as an attraction to draw them into good influences, or as a direct means of mental and moral improvement. In the vacation schools established for the children of the city poor in various cities, play has been a prominent factor, particularly in schools conducted after the plan of the Boston Play Schools, which have applied the methods of the kindergarten to older children.

It is the purpose of this paper to describe the work of a school of an experimental character, known as the Andover Play School, which for the last four years has been supported by the Andover Guild. It is a school for boys ranging from ten to fourteen years of age. Its sessions have been evening sessions in the winter and day sessions during the summer vacations of the last two years. The work of the school has been based entirely upon the play interests of the boys attending. The work has varied somewhat according to the season of the year, but the description will concern mainly the work of the summer sessions.

The school was in session for six weeks during July and August, the school day was from half past eight to twelve, and forty boys were regularly in attendance. There were three periods in the school day, the first and third being one hour and a half in length and the second one hour. A free choice of occupation was granted at the beginning of the term, very little occasion for change in the divisions occurring thereafter.

Perhaps the favorite occupation, on the whole, was the wood-work. There was a complete sloyd outfit and a trained sloyd teacher. No attempt was made to hold the boys to a formulated course. The wood-work was to serve as a sort of supply shop for the apparatus used in the school. The boys made their own butterfly nets and fish nets for the nature work. They made the mounting boards used in mounting the specimens,

the cases for the permanent collections, developing cages for the caterpillars, aquaria for the fishes, box traps for catching squirrels, etc. If a boy was interested in archery, he made his bow and arrows; if in cricket, a bat; if in kite-flying, a kite; if in making a present for a younger brother or sister, a toy table, perhaps. Mothers, too, reaped the benefits of the shop; for a boy often turned from his toy making to the making of a sleeve-board, ironing board, bread board, shelf, or something else for the house. Sometimes the boys united in making some giant affair of common interest; as, for example, a great windmill which supplied power for turning the grindstone, or a dam and sluiceway for the water-wheel, or a catamaran for the swimming pond.

The nature work was hardly less popular than the toy-making. Nearly every morning there might have been seen a company of ten or a dozen boys starting out with the leader in search of butterflies or fishes, and for the incidental study of birds, or frogs, or snakes, or whatever came to their notice while hunting. The older boys devoted themselves mainly to the butterflies, the younger to the fishes. Nearly every species of butterfly to be found in Andover during the season was captured, many kinds of caterpillars taken and developed into chrysalides in the cages, and nearly all the different kinds of fishes to be found in the streams and ponds of Andover were caught and studied. The work consisted largely of outdoor tramps, but there was also laboratory work, the description and drawing of the worm, chrysalis, and butterfly. Honey bees in an observation hive, and ants in nests made of school slates covered with glass were watched. Some of the ants' nests were succesfully kept and watched for months, one boy keeping a colony all winter. The microscope was frequently used in the laboratory work. Note books on fishes were also kept. The interest of the boys was deepest in the gathering and general observation and naming of specimens, the watching and feeding of the fishes, and less in the minuter observation, drawing and naming of parts. The zeal in the hunting of specimens was often intense. It was no uncommon thing to see a boy, when the school was not in session, alone, with a heavy pail on his arm, a fish net in his hand, sweltering along in the dog-day sun seeking some new treasure for his aquarium. Boys who had good luck on these occasions, as for instance in catching some handsome speckled trout, would seek the leader in feverish excitement to communicate the great achievement. During the recent "kissing bug" humbug, a boy sought me in great excitement, having in his possession a cicada, saying he believed it was a kissing bug and that a man had offered him three dollars for it;

but, true to his interest in nature, he spurned the offer and brought the bug to school.

The ignorance of many boys whose environment by no means justified their lack of knowledge was sometimes surprising. A grammar school boy, visiting the school, knew the fishes simply as fishes, being unable to name with certainty a single species. Another boy, who was within one year of the high school, brought to the school, in high elation, one morning, some "speckled trout" for the aquarium, which proved to be tiny spotted salamanders whose legs presented no difficulty to him in his classification.

Allied to the nature work, was the gardening. A part of the school yard was plowed and a definite portion allotted to each boy who chose gardening. Vegetables of various kinds were planted. Last year flower plants were also a part of the care and possession of the boys, and were taken home and transplanted by the boys at the close of the school. The following spring, many of these boys were reported to me as having started gardens of their own at home.

In the winter session stamp and picture collections were substituted for the nature collections, the stamp-collecting craze spreading like wild fire among the school children last winter, some of the candy and cigarette counters suffering thereby to my certain knowledge.

The second period of the day, one hour in length, was spent in outdoor play. In one section of the playground might have been seen a group of boys engaged in a match at archery. In another section, the older boys, perhaps, divided into opposing sides by some natural grouping which lent zest to emulation, were hard at a spirited game of ball. Elsewhere some of the younger or less athletic boys were playing at tenpins on the smooth drive-way, or at bean bags. There were also at times foot-ball, basket-ball, ring-toss, tag games, boxing, wrestling, racing, jumping, vaulting, gymnastic tricks, kite-flying, boat racing at Rabbitt's Pond, swimming races at Pomp's or in the Shawsheen. Three times a week there was a division in swimming. The swimming lessons often served as a good opportunity for collecting specimens or plants for the aquaria. On rainy days there were indoor games, which partook more of the nature of social or parlor games and which were intellectual rather than physical.

The musically inclined boys were always eager for an orchestra. This took the form of the kindersymphonie. The talents and attainments of the boys made the music necessarily crude, but it was much enjoyed by them. The violinists were children who came for the orchestra alone, the play school boys being

confined mainly to time-beating instruments. There was a class also in piano playing which met twice a week.

The printing department appealed to some as real play. The press served in printing the names of the boys in the several departments, the base ball teams, headings for school exercise papers, cards, some bill heads, and, best of all, a four-paged paper issued at the close of the last school, containing compositions by the boys on the work of the various departments, names of prize-takers, cuts of drawings made in the nature work, list of specimens captured, and the like.

Besides the drawing in the nature work, there was a division in drawing for those who preferred it to any other occupation they might have during that period. The work took the form, mainly, of large free drawings from objects. This was the nearest allied to regular school work of any department, unless we except the library from which the boys eagerly drew books of stories, history or nature, for home reading.

Naturally more freedom was allowed boys than is usual in public school work, and occasions for discipline were comparatively few. Some difficulty, however, was encountered in restraining the appetite of some of the boys for apples which did not belong to them. To illustrate in a way the interest the boys had in the school, the following may be worth relating. A fee of fifty cents was collected on the first day of the school. Some boys who were known to have offended the second time in the matter of apple-stealing were denied the privilege of returning to the school, a just proportion of the tuition fee being refunded to the parents. But at the request of the parents the boys were again admitted and they returned, repaid the fee, manifesting their preference to submit to a flogging as evidence that they sincerely intended to resist temptation in the future, rather than to stay away from school.

Another boy in somewhat the same trouble, who followed the swimming class to the swimming pond and endeavored to enjoy the privileges naturally denied him in his season of disobedience, offered so tempting an opportunity for "moral suasion" that he was forthwith turned, in nature's own garb, across the leader's knee and persuaded so effectually that it was not the place where he wished to be, that instantly on his release he gathered his clothes under his arm and vanished. The next morning the superintendent was attracted by the sound of the footsteps of a running boy behind him. Johnny had been thinking of his spanking, with tears presented a letter of thanks from his parents, and besought leave to return to the school. It is needless to say what a good boy he was forever after.

The experimental character of the Andover Play School will

be more clearly understood if some explanation of the theory which prompted the experiment be given.

It has been accepted by many that the child, in his development, epitomizes the development of the race; that there are more or less clearly defined epochs, or stages of growth, in the physical, mental, and moral development of the child; that development progresses from that which is fundamental to that which is accessory, from that which is oldest in the development of the race to that which is newest, from the control of the trunk, for example, to the control of the arms and legs, and thence to the control of the finer co-ordinated movements of hands and fingers; from the fundamental mental operations, as of perception and memory, to association and reasoning; from cleanliness of person, observance of truth, and obedience, to altruistic motives and devotion.

It has been found that when young children are compared with adults, there is a greater difference in the control of fine or precise movements, than in the control of the trunk and larger movements of limbs. At the age of five or six a child is able to walk with ease and grace, but his precision of movement of hands and fingers, for example, is only about three-fifths of that of a boy of sixteen. This difference in control of fundamental and accessory movements is strikingly illustrated in feeble minded children, the control of the finer movements corresponding to a higher degree of intelligence being very deficient. Comparisons made between the lower animals and man show the same increase of disparity in the power of man over that of the lower animals as we pass from the fundamental to the accessory. The muscular arrangement of the monkey hand and that of man is very similar and offers no adequate hint of the disparity in the movements of which they are capable.

Since muscular movement is the expression of nervous activity, we should expect that a study of the development of the nervous system would show a corresponding order of development. Dr. Hughlings-Jackson, the English pathologist, made application of the evolutionary theory in the treatment of mental diseases, conceiving three levels or centers to the nervous system; the lowest level controlling the reflex and involuntary movements, the middle level the higher, more complex movements, and the highest level being the center of universal and complete co-ordinations. The three-level theory is now the accepted basis of diagnosis in the treatment of epilipsies.

Dr. Frederick Burk, in his very able study of the development of the nervous system, draws with apparent justness the following conclusions:

"The order of development of the independent parts of the physical and nervous system is, as a general principle (subject

doubtless to minor exceptions) from that which is oldest in the racial history towards that which is most recent. . . ."

"In an extremely loose sense, clearly recognizing the principle that the organism develops by parts, each of which has a different time of beginning its development, a different rate of ripening, and a different period of reaching maturity; nevertheless, we may regard the period of infancy as one of predominating nascencies of the oldest fundamental activities largely in control of the lowest level of the nervous system; the period of childhood from two years to puberty as the period of predominating nascencies of special sense and their association one with the other; the period of adolescence as the period of the predominating nascencies of the higher form of associations, *i. e.*, those which have been developed in the history of the human race."[1]

The point of application to play is here. Out of these nascencies arise the instinctive tendencies of children. The experiences of the nervous and muscular systems of man in the long period of action and reaction of evolutionary development have made natural, if not irresistible, certain modes of conduct under certain conditions. These impulses to definite reaction to given stimuli re-echo the historic activities of the race, and are called instinctive. Some are intimately associated with organic functions which constitute our physical life, others with the activities which have made for the preservation and enrichment of life. It is the manifestation of these impulses which give rise to the phenomenon of play in children. Play might then be defined as the expression of awakening instincts. To understand its full significance in child development, it is necessary first to understand the significance of instinct.

Prof. James[2] in his admirable chapter on Instinct sets forth the law of transiency of instincts. Many instincts appear, are active for a season, and then fade away. If during the period of activity of any instinct the environment is favorable for its manifestation, a habit of acting in accordance with it is formed which remains after the instinct has faded away; but if the environment is unfavorable for the development of a habit, after the instinct has faded away there will be no reaction in accord with it, however favorable may be the external conditions. A chicken that has not heard the call of its mother until it is eight or ten days old will give no heed to it then. If a babe has been fed with a spoon during the first days of its life, it may not easily learn thereafter to suck at all. A young dog kept from the opportunity of burying its superfluous food

[1] *Pedagogical Seminary*, Vol. VI, No. 1, p. 32.
[2] William James: Psychology, Chap. XXIV.

in the soil, went through all the motions of burying articles in the house, but soon abandoned the act and never again attempted to bury anything.

"The natural conclusion to draw from this tranciency of instincts" says Prof. James, "is that most instincts are implanted for the sake of giving rise to habits, and that, this purpose once accomplished, the instincts themselves, as such, have no *raison d'être* in the physical economy and consequently fade away."

The play impulses of children then, we may affirm, have the all important office of giving rise to habits and permanent interests. There is a time when boys love, and must learn, to play ball, swim, skate, or be deficient in such sports and the particular training they give all their lives; there is a time when the zeal for collections or the impulse for construction may do their work in the development of interest in natural history, or of skill of hand; in short, there is a tide in the affairs of childhood which must be taken at its flood, or life, in some particular, be bound forever after in shallows and in miseries.

Taking this explanation of play, we should expect that the play activities of children would, in general, illustrate the order of development given by Burk. This is indeed so. Groos has mentioned in his "Spiele der Menschen" the play of infants with the sense apparatus, the grasping with the hand, sucking with the mouth, playing with parts of the body, experimenting with sense of taste, smell, hearing and sight. These and the motor plays, creeping, walking, running, climbing, illustrate the play activities of the lowest level of the nervous system. From the age of two to puberty there is an increasing tendency to associate sense and motor plays with the accomplishment of some purpose; the individual type of play gives place, more and more, to plays which require several players; there is a higher mental element in the play; the simple imitation as of sweeping or dusting displayed by the two year old child, becomes the imitation of house keeping, playing store, being firemen, and the like. Children unite in games in which now one and now another child comes into prominence, as in the old traditional games of Ring a Ring Rosie, and On the Green Carpet. Emulation, which calls into prominence skill, which means, really, power of co-ordination, gradually becomes more prominent. The eye becomes more alert, the ear keener, and the muscular control increases steadily. The boy eludes his pursuer in a game of tag by dodging; he gauges the amount of effort needed, and the direction of the hand, in throwing a ball, or in tossing a ring. He begins to seek prominence through skill, but as yet it is for himself alone rather than for his "side."

Mr. Croswell's[1] study of the amusements of Worcester school children shows a steady increase in interest in games like London Bridge, from six to ten or twelve, also in games like hide-and-seek, while play with toys decreases rapidy from six years on. Interest in ball games, however, steadily increases up to the eighteenth year.

At the age of twelve interest in games of skill, especially those for which there are opposing sides or teams, increases rapidly. If by this time boys do not begin to learn games of skill, the chances are that they will never be greatly interested or proficient in them. This is the period of development of the association fibres of the brain, according to Flechsig, and of the "highest level" of Jackson. It is the period of the nascencies of the highest form.

To make some practical applications of the theory that the play instincts of children re-echo the historic activities of the race in its march toward civilization, let us review in brief the essential characteristics of some of these activities. I follow the list of some special human instincts given by Prof. James:

1. Constructiveness. This includes the whole sweep of mechanical industries. It has developed from the crude hut and weapon making of the savage, to the highest we have achieved in architecture and mechanic arts.

2. Acquisitiveness. This has developed from the simple idea of possession and ownership, to love of accumulation and preservation of personal and public properties, museums, and libraries.

3. Pugnacity. This is the spirit of overcoming, subduing, whether peoples in war or the forces of nature. It has made possible the horrors of war, but it has made possible, also, the discoveries of the world, the development of new lands, and the conquest of nature, time, distance, and even death. Pugnacity is allied in many ways to the hunting instinct.

4. Sociability. This has made the home, the community, and the nation, and is even now reaching out to embrace the brotherhood of all men. It is manifested in love of kindred, of neighbor, of country, and of humanity.

5. Imitation. "The whole history of civilization depends upon this trait," says Prof. James. "What man has done man can do"—and better is the spirit of imitation coupled with emulation.

6. Emulation. "Nine-tenths of the work of the world is done by it."

To such activities and tendencies have been due, in a large measure, the achievements of the race, and these appear as in-

[1] *Pedagogical Seminary*, Vol. VI, No. 3.

stinctive in the play of children and youth. And to give scope to their expression was the object of the Andover Play School. As an educational factor the work of the Play School meets several demands.

It meets the demand of the impulse of constructiveness. Here find opportunity for expression, in miniature, the conception of ideals, the habit of execution, which in the race have made the arts what we see them to-day. This is the first great point. It conserves the basic faculty for mechanical and industrial achievement which in our modern minute differentiation of labor tends to be disseminated. Then it supplies in a measure the sense-motor training claimed by Mosso to have been an important factor in the development of the great masters of the middle ages. "Das Geheimniss des Genies ist die Beweglichkeit." Again, the culture of the will, through the conception of an ideal and its execution, as made possible in the choice and construction of models, especially those to serve some definite purpose of the maker, is of the highest value. The imagination, also, is quickened, it holds in poise a remote and worthy end for present action, a necessity in every strong character.

It meets the universal hunger of children for contact with nature, and offers a legitimate channel for the expression of the hunting and collecting instincts. If the love of money is the root of all evil, the love of nature is its great antidote, the great counter-force to sordid commercialism. God speaks through nature also, as through his written word, and he who possesses the great treasures of the hills, fields, streams, and woods, has treasures that money could not tempt him to abandon. And for the child, love of nature leads easily to higher religious emotions and love of God. He who loves God's creatures and creations must love God and see God in them.

> "He prayeth best who loveth best
> All things, both great and small;
> For the dear Lord who loveth us,
> He made and loveth all."

It meets the demands of the boy's nature for play and games. In the free play and the directed games is exercised another great force in the development of civilization, sociability. Here children recognize the needs and demands of the whole as in distinction to their own individual needs and demands. Here is the beginning of the community idea, of mutual advantage and dependence, of conformity to public opinion. This socializing influence is one of the best points of the Kindergarten. And when the time for "team" games has arrived, how prominent is the sacrifice of individualism to the general good,

the altruistic motives of conduct. Dr. Gulick[1] has well shown the moral aspects of group games and explained their significance to religious instruction. Here is the proper field for the exercise of the instinct of pugnacity. Here is a legitimate channel for the tendency to organization or banding; the "team" is the natural substitute for the "gang." These games of adolescense hold before boys one clear, definite object, for the accomplishment of which they devote the entire energy of their being. What matters danger to limb, what matters pain, fatigue, loss of self in the struggle of the whole? courage, duty, honor, success are at stake and the victory must be won. The characteristics of these games, says Dr. Gulick, are a tremendous activity, definite end or object, co-operation, and hero worship. The best moral training for Anglo-Saxon boys must involve appeal to these characteristics.

Play is not an accompaniment of child-life merely, it is a necessity, an expression of the child's intrinsic nature. Without play a child cannot come into possession of his physical, intellectual, and moral birthright, can never become a man. Under some conditions the play of children and youth may take care of itself, possibly, and serve its end, but under the conditions of modern life, definite provision must often be made. The race is differentiating so rapidly that children are often denied the environment necessary for a broad foundation, and narrow childhood develops into a top-heavy maturity. Not alone in the ordinary work of education have these facts a mighty import, but especially can no social effort for the children of the city poor do a full work without attention to them. There are numberless organizations in churches, settlements, and charitable societies designed to appeal to certain interests of growing boys and girls, but I believe that they are successful, so far as the method is concerned, to that degree and extent to which they follow the basic activities of the human race. On these may be built a physical, mental, moral and spiritual structure, stable and secure at its foundation. Such is the beginning, I do not claim it is more, the beginning of the full character, but such a beginning as is the choice of the foundation stones upon which is to be reared a noble structure.

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[1] *Pedagogical Seminary*, Vol. VI, No. 2.

A STUDY OF CHILDREN'S READING TASTES.

By CLARA VOSTROVSKY, Modesto, California.

"Our teaching must be regulated by what children are."

The following study is an effort to ascertain in some measure, the general reading tastes of school children, before any organized effort has been made to direct it. In one respect, at least, it is a local study, having been carried on in the schools of Stockton, California, alone. It is possible, however, to lay too much stress on local aspects, for just as we find certain national characteristics in all Americans, whether citizens of Boston, New York or San Francisco, however great the surface dissimilarities may be, so too, it is probable that the differences between the answers of Stockton school children and those of other sections of our country, which may be due to peculiarities of local life, are, after all, of minor importance. But whether this is so or not, must be left for more extended studies to determine.[1]

The material for this investigation was gathered in response to the following simple questions, which were submitted without explanation, to all the children of the different schools on the same day, and at the same hour, so that communication in regard to them was impossible.

1. (a). Do you take books from the Public Library? (b). If so, how often?

2. (a). What was the name of your last book? (b). Why did you take it? (c). How did you like it?

In all, answers from 1,269 children were received, 604 of these being from boys, and 665 from girls. In order to secure uniformity, the results in every case, were reduced to percentages.

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[1] In the Annual Report of the New York State Superintendent of Instruction, for 1897, Mr. H. C. Henderson gives a presentation of the beginning of a similar study by Prof. Thurber, of Chicago University. The results are based on returns from the Grammar Schools of Chicago alone, and as far as comparison is possible, seem to agree in the main, with those of this study.

This is the only other statistical study along like lines, which, as far as I know, has been thoroughly worked over. Attempts at similar studies, most of them much more extended in plan, have, however, been made at various times, especially by librarians. With the exception of an occasional collated result, these give us, as a rule, simply a few impressions gleaned from the children's statements.

In regard to the use of the Public Library, the answers show that 50% of the boys, and 48% of the girls borrow from its store, against 50% of the boys and 52% of the girls who do not. This is one of the results which would naturally vary with local conditions, such as the age at which children are permitted to draw books, the range of books pleasing to children in the library, etc. It is somewhat contrary to popular opinion to find that the percentage of boys using the library is slightly greater than that of girls.

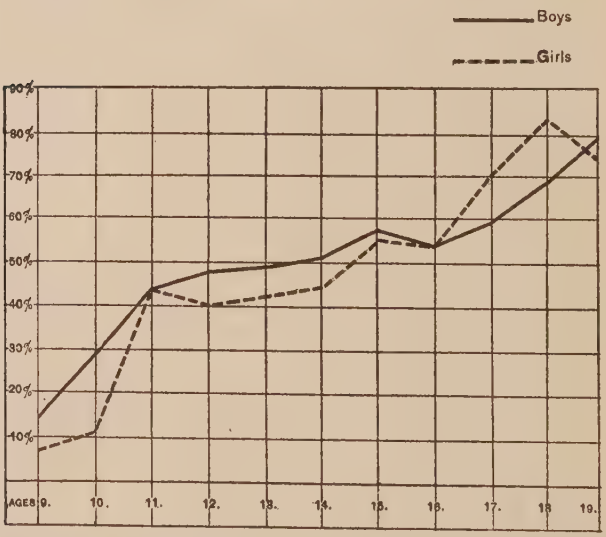
Of apparently more than local importance is the gradual increase with the age of the number taking books, as shown in the following table and chart.

TABLE A.

Showing Number of Children Taking Books.

Ages.	9	10	11	12	13	14	15	16	17	18	19	
No. of papers.	27	53	89	98	80	83	62	48	34	16	14	Boys.
	24	53	81	87	92	107	86	74	30	23	8	Girls.
Take books.	15%	28	43	48	49	51	57	54	59	69	79	Boys.
	8%	11	43	40	42	44	55	54	70	83	75	Girls.
Do not.	85%	72	57	52	51	49	42	46	41	31	21	Boys.
	92%	89	57	60	58	56	45	46	30	17	25	Girls.

CHART A. SHOWING INCREASE IN NUMBER TAKING BOOKS.



It will here be noticed that the fact that more boys than girls use the library is due to boys under sixteen years of age; that after sixteen, more girls than boys make use of its shelves. Is

this due to a certain stage in the development of the sexes, to a greater leisure than on the part of girls, or to what is often claimed, but so far as I know not substantiated, that about this time many of the brightest boys leave school to engage in other occupations?

The answers in regard to the names of the books last taken were collated under the headings, 1 Juvenile Story Books,[1] 2 Fiction, and 3 General Literature, the last being again divided into several sub-headings. Whenever there was any question as to the proper placing of a book, the classification in the Stockton library catalogue was referred to and accepted. The result is shown in the following table:

TABLE B.

Giving Classification of Books Last Taken.

AGES.	BOYS. Juvenile Stories.	GIRLS. Juvenile Stories.	BOYS. Fiction.	GIRLS. Fiction.	BOYS. Gen. Lit.	GIRLS. Gen. Lit.
9	100%	100%	——	——	——	——
10	65%	100%	——	——	——	——
11	67%	87%	5%	5%	28%	8%
12	61%	77%	8%	5%	31%	18%
13	74%	64%	6%	22%	20%	14%
14	55%	60%	11%	27%	34%	13%
15	50%	40%	11%	35%	39%	25%
16	44%	18%	12%	35%	44%	47%
17	35%	9%	17%	36%	48%	55%
18	——	——	15%	43%	85%	52%
19	——	——	20%	67%	80%	33%
Average.	54%	49%	10%	26%	36%	25%

The large percentage of fiction, especially juvenile fiction (juvenile story books), is the most prominent characteristic. Children evidently consider the library not as a storehouse for knowledge, but as a storehouse for stories, and one cannot help but wonder whether children who live so largely in the imaginative world are not apt to lose sight of the beauties and enjoyments of real life. On the other hand, it must be remembered that the story, by broadening the horizon and bringing into it new associations, serves as one of the most effective helps to growth (if the stories are well chosen) that is open to childhood. So if we decide that there is a tendency among children to reading too many story books, we must be careful while endeavoring to regulate this, not to destroy altogether, the enjoyment which the child finds in placing himself in these new surroundings.

Turning again to the table, it will be seen that about the sixteenth year, a change takes place, both boys and girls showing

[1] It should be noted that according to this classification, some juvenile books would have to come under the heading of General Literature.

then the beginning of a greater interest in works of a more general character. (It is doubtful, however, if the works in general literature would have been even as well represented as they are, if the test had been made during vacation, instead of during the school term.)

By referring to Charts B. and C. given below (based on this same table), one sees more clearly the natural decrease with the age in the number of boys and girls naming juvenile story books (Chart B.), and also the noteworthy fact that girls apparently read very much more fiction than boys, more names falling under this heading at every year after the twelfth. (Chart C.) That the decided interest in fiction begins about the age of adolescence is also worth noting. Does this greater interest in fiction go with the earlier maturity of girls? There are more boys and girls, on the other hand, interested in juvenile story books after the fifteenth year. (Chart B.) Then, too, boys have a better record for the use of books classified under general literature, the number given being greater at almost every age than that given by girls. (Table B.)

The works falling under General Literature were sub-divided into History and Historical Biography; Literature and Literary Biography; Science; and Miscellaneous; as the following complete table shows.

TABLE C.

Showing Total Percentages of Different Books Drawn.

Juvenile, ...	Boys,	54%
	Girls,	49%
Fiction, ...	Boys,	10%
	Girls,	26%
Gen. Literature, ...	Boys,	36%
	Girls,	25%
Hist. and Hist. Biog...	Boys,	15%
	Girls,	10%
Lit. and Lit. Biog.....	Boys,	4%
	Girls,	7%
Travels, ...	Boys,	4%
	Girls,	3%
Science, ...	Boys,	7%
	Girls,	2%
Miscellaneous, ...	Boys,	6%
	Girls,	3%

CHART B. SHOWING DECREASE IN THE NUMBER TAKING JUVENILE STORIES.

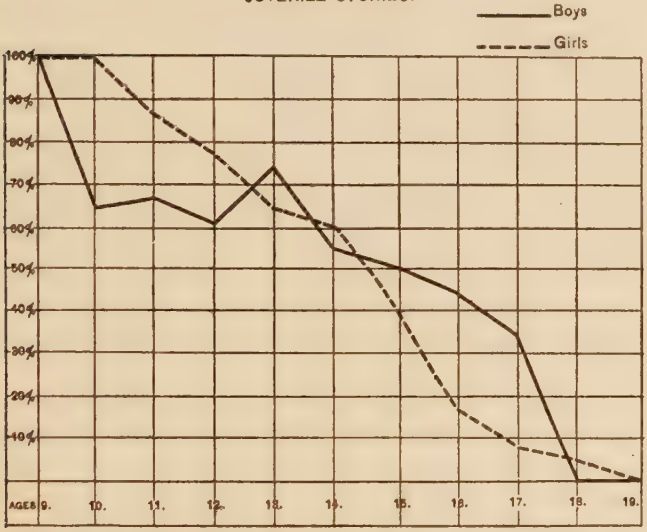
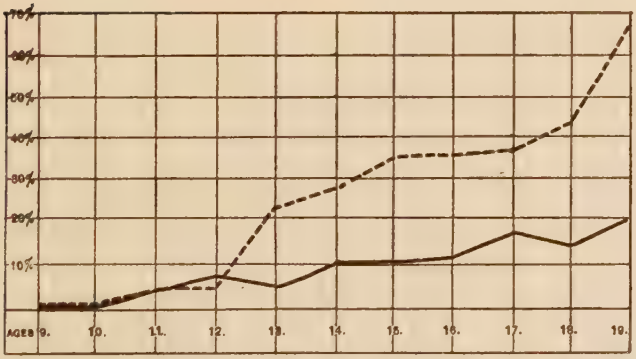


CHART C. SHOWING INCREASE IN WORKS OF FICTION.



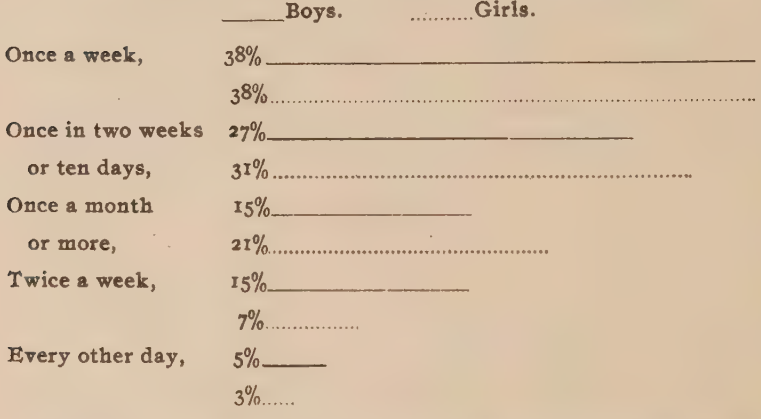
The fact that history and historical biography take the lead in the works of general literature may be due to local causes, showing what can be accomplished through the efforts and enthusiam of a special teacher of history. Girls confirm what is generally supposed to be true in regard to feminine taste by the

larger percentage naming literary essays and literary biography, while boys prove more interested in science and also inclined to be more interested in history and travels.

Keeping in mind the kind of books named, let us turn to the question in regard to how often they were taken. We find answers varying from those who read only one book a month (and they are fairly well represented), to those who plunge into a new work every other day. After these extremes, it is somewhat of a relief to find that the majority exchange their books about once a week. (Chart D.) Considering that it is mainly stories that are read, is this or is this not, too often?

CHART D.

Showing Relative Time in which Books are Exchanged.



Boys, it will be seen, not only read more books, but read them more hastily; and too hastily, one is inclined to add, although the fault may be no worse than the opposite one into which girls seem more prone to fall, that of dilly-dallying over a book too long, as seems to be the case when they declare that they exchange their books (which are quite as simple as those taken by boys) only once in a month or more.

The expressions of the children in regard to how they liked their last books, reveals the fact, if anything can, that the critical attitude is not developed early in life. The world is all so new to children, they are so eager to gain new experiences, that if a book along the lines in which they are interested has only some little mark of merit, it is sure to please. Table and Chart E. show this.

TABLE E.

Showing how Special Classes of Books are Liked.

	JUVENILE.	FICTION.	GEN. LIT.	AVERAGE.	
	Per cent.	Per cent.	Per cent.	Per cent.	
Very much,	76	94	71	80	Boys.
	78	68	64	70	Girls.
Pretty well,	8	—	6	5	Boys.
	2	9	13	8	Girls.
Not at all,	6	—	8	5	Boys.
	9	11	11	10	Girls.
No answer,	10	6	15	10	Boys.
	11	12	12	12	Girls.

CHART E.

Showing how Books are Liked in General.

_____Boys. .....Girls.

Very much,_____

.....

Pretty well,_____

.....

Not at all, _____

.....

No answer, _____

.....

If what was classified under the headings "Pretty well," "Not liked," and "No answer," should be combined, it would not begin to equal what was liked "Very much." This is encouraging in one sense, for if children are so easily pleased it cannot be difficult to direct their taste for what is good. Girls, it should be noted, are somewhat more critical than boys in regard to the books which they read.

Among the most interesting answers were those to the question "Why did you take your last book?"[1] 67% of the boys and 62% of the girls gave definite reasons for taking the books, against 33% of the boys, and 38% of the girls who answered indefinitely, as, "Because it was nice," "I took it to read," etc. Table F. and the accompanying Chart show the steady increase in the more definite answers, especially in those given by boys.

[1] Children, as well as other patrons of the Stockton Public Library have free access to the shelves.

TABLE F.

Giving Percentages of Definite and Indefinite Answers.

	DEFINITE.		INDEFINITE.	
Ages.	Boys.	Girls.	Boys.	Girls.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.
9	40	50	60	50
10	42	50	58	50
11	52	42	48	58
12	59	47	41	53
13	63	55	37	45
14	71	60	29	40
15	74	86	26	14
16	77	75	23	25
17	78	68	22	32
18	89	80	11	20
19	100	100	—	—
Average.	67	62	33	38

CHART F. SHOWING INCREASE WITH AGE IN DEFINITE ANSWERS.

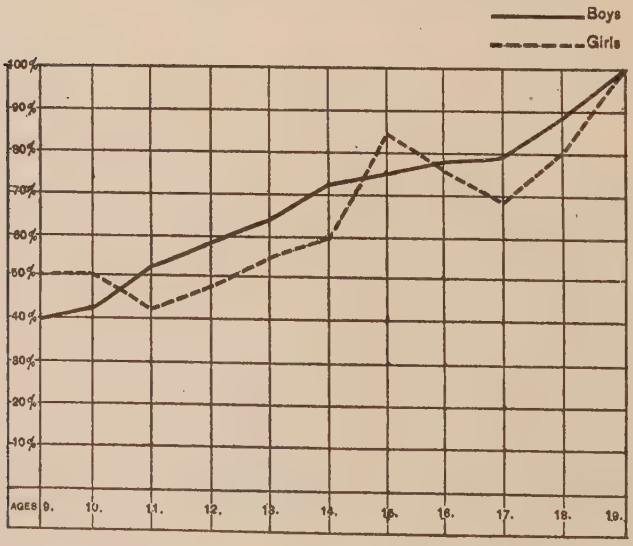


Table and Chart G. give the special reasons for taking out books.

TABLE G.

Showing Why Books are Taken.

	Juvenile. Per cent.	Fiction. Per cent.	Gen. Lit. Per cent.	Average. Per cent.	
Substance or school,	18	18	78	38	Boys.
	8	6	71	29	Girls.
Good, nice, etc.,	29	21	7	19	Boys.
	32	23	12	23	Girls.
Recommended,	13	29	3	15	Boys.
	23	36	5	21	Girls.
To read,	9	11	4	8	Boys.
	10	8	7	8	Girls.
Author,	6	7	1	5	Boys.
	2	10	1	4	Girls.
Name or Series,	2	—	—	1	Boys.
	6	2	2	3	Girls.
Miscellaneous,	22	14	7	14	Boys.
	18	15	2	12	Girls.

CHART G.

Showing Why the Books were Taken.

_____Boys. .....Girls.

Substance or School, _____
.....

Good, nice, etc., _____
.....

Recommended, _____
.....

To read, _____
.....

Author, _____
.....

Name or Series, —
.....

Miscellaneous, _____
.....

In these answers, the Stockton school children make a good showing, since the majority state that they took their books because of what they contained (substance), or for school purposes, the classification under substance being made up of such answers as, "I took the book because I was interested in reading about the life of Peter the Great."

Not only do more girls than boys rely on a mere feeling of niceness in regard to their reading, but more, too, rely on the recommendations of their friends. The greater independence on the boys' part, goes with the more definite reasons for taking out books, which is confirmed by the greater percentage under "substance and school." The inference that boys are guided more by reason, girls more by sentiment, in their reading, is strengthened by the fact that the results in Juvenile, Fiction, and General Literature corroborate one another in regard to this.

The prominence given to recommendation in the children's answers shows the importance of their associates. The desire to read what others have read, to improve and broaden out in the direction of those who are nearest, is so general that it should not be lightly regarded by those who attempt to influence a child's reading taste. In looking over those whose recommendations were most often followed, the children's "chums" and schoolmates are seen to head the list. Relatives are occasionally but not often mentioned, while the teacher who might do so much, is seldom named except in connection with works of reference.

Certain other very marked differences between the sexes, come out in this study, particularly in a classification of the children's tastes as definitely mentioned by themselves, especially in regard to the juvenile story books which they read, since it was found that in drawing these the children consulted their real interests most often. In this classification, 52% of the girls say that they took the story because it was about children (generally about girls), while this is true of only 12% of the boys. Only 24% of the girls chose the book because it was exciting, while 76% of the boys state their delight in the venturesome. This great difference is made still greater by the fact that the exciting stories mentioned by the girls are very quiet compared to those mentioned by the boys, "The Young Lieutenant," by Adams, and "Robinson Crusoe" being perhaps the most exciting. The boys' tastes in general are well illustrated by a boy of twelve, who states that he took "The Moose Hunters" because he liked to read "about the wilderness of the world;"[1] while the following sentiment by a girl

[1] It is probably due to a recognition of this that certain boys' magazines, like Harper's "Round Table," which devote themselves largely to stories of adventure, have achieved so great a popularity.

of fourteen is shared by a large numbers of others, "I like 'Quinnebasset Girls,'" she says, "because it tells all about the thoughts and feelings of girls."

TABLE I.

Showing Children's Tastes, as Definitely Mentioned by Themselves.

	Boys. Per Cent.	Girls. Per Cent.
Because of children	12	52
Because of adventures, etc	76	24
Because funny	6	12
Because of misc. reasons	6	12

Since the name of a book presumably plays some part, however unconsciously, in deciding whether or not it will prove interesting, the juvenile books were again classified to see whether the titles in themselves bore out, in the main, the children's statements in regard to their preferences. 71% of the girls' books had names suggestive of children, while this was true only of 21% of the boys' books. While some of those mentioned by the girls were in regard to boys alone, not one given by the boys was merely in regard to girls. Are girls, then, more interested in their brothers than boys are interested in their sisters? Only 10% of the names of the girls' books indicated adventures against 50% of the boys' which had such suggestive titles as, "The Young Defenders," "A Night in the Swamp," etc.

TABLE J.

In Regard to Titles of Last Book.

	Boys. Per Cent.	Girls. Per Cent.
Of children	21	71
Of adventures, etc	50	10
Of fairy-land	6	6
Misc.	23	13

All this taken together seems to indicate girls more domestic and boys more adventuresome tastes. It is in line with what Max. Pemberton, who has himself written books for boys and edited a boys' paper, has to say: "For style a boy cares nothing; he reads Stevenson for the story. He must have incident, excitement,—a hero."

When we come to the authors most often mentioned by boys and girls, we meet again the wide dissimilarity in their preferences. Girls mention 79 different authors, boys 65. Only 17 are mentioned by both, and of these, Louisa Alcott and Horatio Alger are apparently the only ones who enjoy at all anything

like equal favor.[1] Alcott, by far, stands first in the girls' list, Sophie May comes next, followed by Martha Finley, H. Alger, Minnie Paull, Frances H. Burnett, in the order given,—almost all women writers, it will be seen.

W. T. Adams (Oliver Optic) is the favorite with boys, being named almost twice as often as his successor Henty. Then come Edward S. Ellis, Horatio Alger, followed by Harry Castleman, J. T. Trowbridge, and L. A. Alcott,—in this case almost all men writers.

In fiction, taking the entire number of books mentioned, it is interesting to find that more standard works were drawn by boys than by girls.

There were so few juvenile works that were not liked, that as many of these as possible were read in the hope of discovering somehow, what it was to which the child objected. In some cases, as in "Polly Oliver's Problem," which was not liked by a girl of fourteen, it was impossible to understand why. In others, the solution seemed an easier one. Thus, "Captain Polly," by Sophie Swett, was probably not appreciated because the subject of labor and capital taken up in it, was imperfectly understood by the girl of thirteen who read it. Then, too, there may be in the story, a little "preachiness" to which children object. James Otis's "Tim and Tip," was not liked, a girl's paper stated, "because the first part was sad." This was probably the objection that two girls and a boy had to "Nibby's Christmas" and "Little Nell." A girl of fourteen, threw aside "A Bread and Butter Miss" in disgust, because it seemed to her "silly." That a boy of twelve did not care for P. C. Headley's "Fighting Phil," is no doubt due to the superabundance of detail introduced in its pages. This objection to useless detail is well expressed by a boy of fifteen, who, in referring to certain histories, says, "These books were written in an odd way, that is because they told every little event, which was useless."[2]

In summarizing the main results of this study, we find that the children of Stockton use the public library to a greater and greater extent as they grow older, more boys doing so before the age of sixteen, and more girls after this age. Fully half the books taken are juvenile story books. In regard to pure fiction, girls prove much more interested in works of this class, than do boys. The latter, on the other hand, show a greater preference than do girls for works of a more general character.

[1] There is a wide range of juvenile literature from which to choose, in the Stockton Public Library.

[2] This objection to useless detail is in line with one of the results of my little "Studies of Children's Own Stories," published in Earl Barnes's "Studies in Education," Stanford University, 1896. pp. 15-17.

The special interest that girls have in fiction begins about the age of adolescence. After the sixteenth year either the extreme delight in stories fades, or school demands make it necessary for both boys and girls to use the library then more largely for works in general literature. Of these works boys care more for science and history and historical biography and travels, girls more for literature and literary biography. The exchange of books varies in time from every other day to once in one or two months, the majority drawing a new book once a week. Boys, on the whole, seem to read more hastily than do girls.

In stating how much pleasure they have gained from their reading, both of the sexes show lack of critical ability, yet despite this, state definite reasons for taking out books, and prove to have definite tastes. The definiteness in the answers of both increases with the age. In the special reasons which they give for using the library, about one-third state that it was for school purposes or for some special information that the book contained. A large percentage were guided, however, solely by an indefinite feeling of niceness, etc., in regard to the story, while quite a fair number depended on the recommendations of their friends. Few mention the author or the name alone as having influenced them. Taken altogether, boys are more definite than girls in their answers, and more independent in their attitude.

In the classification of the children's tastes, as stated by themselves, we get the most marked differences between the sexes. According to this, girls prefer domestic stories, especially stories about children like themselves, while boys care more for books of adventure. This difference in preferences is confirmed by the classification of the titles of the last juvenile books taken.

No boy confesses to a purely girl's story, while girls frankly do to an interest in stories about boys. Women writers seem to appeal more to girls, men writers to boys; hence the authors named by each sex, are almost entirely different. In fiction, more standard works were drawn by boys than by girls. The fact that certain juvenile books were not liked, seems due to a superabundance of descriptive detail in them, to the introduction of sad scenes into the story, to what seemed to the child "silly," or to what was imperfectly understood.

It is probable that the special reading tastes of boys and of girls may have their foundation in the history of the race. This does not mean that these preferences, however good in themselves, do not require direction. When left to develop according to chance, as seems to have been quite largely the case with the children of Stockton, the tendency is often towards a selection of books which unfit one for every day living, either by presenting, on the one hand, too many scenes of delicious excitement, or, on the other, by narrowing the vision to the wider possibilities of life.

FOUNDATIONS OF NATURE STUDY.

By C. F. Hodge, Clark University.

Any subject in the curriculum, even nature study, may be taught in so superficial a way as to deserve to be called a fad. Essentially, a fad is something trifling or something important treated in a trifling manner, and in education there seems to be a fatal gravitation toward a faddistic treatment of almost everything. This is possibly due at bottom to the fact that our educational system is in reality an evolution, a living, moving, growing process, while for sake of ease, its methods tend to become deadly mechanical. So from time to time everything has to be jerked out of its dead shells and brought into vital relations with the needs of actual human life. Thus the past few years have witnessed a general moulting of the old mechanical methods even in such fundamental subjects as reading and spelling, writing and drawing, arithmetic, geography and history, and certainly to all but the ultra conservative, to all who look upon our school system as a living and growing embryo, nothing affords better assurance of life than just these growths, moults and changes toward establishing fundamental relations between education and the realities of human life, the environment to which all really living education must comform. And in comparison with the whole history of the race how recent, how new, how very embryonic a thing is a formal system of public education. It is not strange that in these earlier stages it should assume invertebrate methods of growth with all the attendant crises of transformation and moulting as development proceeds.

A more economical and rational method of growth has come to predominate among the vertebrates where plasticity is maintained and the process goes on insensibly and free from the shock and contortion of a crab pulling himself out of his shell. This vertebrate method must be attained by keeping things plastic and especially by developing such intimate relations between education on the one side and actual life on the other that no great degree of disadjustment can ever occur. When this is accomplished, education in its every phase can become the true preparation for real life, for which the prolonged period of human infancy, childhood and youth was intended and developed.

The problem of saving a subject from faddism and superficiality consists thus in discovering its fundamental relations to human life and building its pedagogy along these lines. To do this with elementary science seems to have been extremely difficult. Attempt has followed attempt, the last worse than all its predecessors. This may be due in part to the newness, the great complexity and the suddenness with which natural science has come upon the educational field; but it has seemed to the writer that the chief cause of difficulty and failure has lain in not distinguishing clearly between the special and trivial in science and the fundamental. And it must be generally conceeded that the important and fundamental should precede the special, and should constitute the body of elementary science from which all later specialization may spring. Lest a misunderstanding arise here, I must add that I refer to those aspects that are educationally fundamental, and not to the special propositions which may be fundamental to any particular science. My meaning on this point will be clear as we proceed.

The object lesson has thus gone by the board. Why did it fail? Ask James Whitcomb Riley and he will tell you in a way that leaves no room for further question. Observation is an important thing, training the powers of observation is important, but their value depends upon the *worth-whileness* of the whole process including the object and purpose of the observation; and if it consisted in "observing" the color of a "blonde" or "brunette" peanut, the whole lesson becomes a ridiculous waste of time. So, too, scientific analysis is a fundamental process; but for elementary work the revolt against it is universal. We must first have a knowledge of wholes, before we can profitably analyze into parts. Making classification an important part of elementary science courses is again putting the cart before the horse; for children must have things before the need of names and classification comes into any prominence.

A paper ought to be written on the utterly chaotic state of elementary science instruction just at present. My purpose, however, is rather constructive than critical. Out of all the chaos, in which we find primary classes maltreated with every imaginable subject from the minute structures of insects and the structure and functions of root hairs, cells and protoplasms to the abyssmal inanity of counting the legs of a boy, one clear demand has emerged. In a word this is, "give us wholes adapted to the child's understanding and let them be first studied in their normal relations," *i. e.*, "give us first, as foundations for all science work, actual *nature study*."

Answers to this demand have been numerous, to say the least, but I have no time to discuss the many and various plans

suggested. That would require another paper especially devoted to it. But when it is possible for so good a nature student as John Burroughs to say: "Of the books upon nature study that are now issuing from the press to meet this fancied want of the schools, very few of them, according to my thinking are worth the paper they are printed upon. They are dead, dead, and neither excite curiosity nor stimulate observation."[1] It would seem that even this newest and most hopeful movement toward elementary science teaching were fast going the way of its forerunners. If it is to be saved from their fate, it is high time that we strive to ascertain the fundamental elements of this important work.

It seems to me that man's real, fundamental interest in and relations toward nature should point to what is fundamental in nature study, and for these we have two great sources of information. The first of these is the development of relations with nature as recorded in history, anthropology, and to some extent in geology. The second is found in the spontaneous interests of children as revealed in modern child study. Besides these there are other blocks of foundation material in the psychological laws which determine quality of knowledge and interest in general, in man's ethical and social relations towards the resources of nature and in his fundamentally religious relations to nature. These we will consider briefly in order.

Astronomy is often credited with being the oldest of the sciences, and in consequence is made the general background for nature study courses, the rolling year, seasonal changes, etc., etc. I doubt whether this is true in any fundamental sense. Ancient astronomy was little, if any, more than an art, combined with religion or superstition, by which men measured *time*, one of the most important of human possessions. At farthest, authentic data of Chaldean civilization extend back only 6,500 years B. C., and back of all these faintest glimmerings of anything approximating formal science lie tens, certainly, and possibly hundreds of thousands of years of *human nature study*. Here is the place to dig for foundations. What relations has mankind established with nature during this vast period? This is an all important question, for on these foundations civilization itself has been constructed.

From what we know of human progress and primitive cultures it is possible to project the curve back into this primordial age, dark or "golden," as you please, to give us some conception of this great period of nature study.

And first, we would find man, a highly crafty and intelligent

[1] John Burroughs: Nature Study. The Outlook, Feb. 4, 1899, p. 326.

natural shelter of caves. He lived in families, the period of omnivorous animal disputing with the brutes for food and the infancy being somewhat prolonged, affording the children time to learn the prowess of their parents, possibly of their grandparents. Language, God save the mark, was but slightly developed and hence the education of the children of that time was real and active, related to the whole neuro-muscular system. There was naturally little stability of home life, much wandering about in search of food and much being chased about by wild beasts and rival families of men.

"Suppose," says Professor Huxley, "that an adult man, in the full vigor of his faculties, could be suddenly placed in the world, as Adam is said to have been, and then left to do as best he might, how long would he be left uneducated? Not five minutes." But there are a good many "five minutes" in ten thousand years. "Nature would begin to teach him," he goes on, "through the eye, the ear, the touch, the properties of objects. Pain and pleasure would be at his elbow telling him to do this and avoid that; and by slow degrees the man would receive an education, which, if narrow, would be thorough, and real, and adequate to his circumstances, though there would be no extras and very few accomplishments."

Nature's education through this long period consisted in teaching man the plants capable of furnishing food and means of shelter; how to avoid at first, and later how to outwit and conquer the more powerful animals that hunted him; how to make and use rude weapons of wood or bone or stone with which to hunt and fish, as well as to fight, for undoubtedly, from all but the very earliest times, man was his own most dangerous enemy. How infinitely much more primitive man was obliged to learn, and how infinitely more alive and real was the quality of his knowledge, of the ways and wiles of animals than is obtained by seeing a few superficial characters of an animal and learning its place in an artificial scheme of classification, or in counting the legs and tail of a cow. How much more real was his knowledge of the sun, moon and stars, when they were his only clocks.

That this education was successful and adequate is witnessed by the fact that it built the human brain up to practically what it is at present. Spencer's statement that the brain of civilized man is "nearly thirty per cent. larger" than that of the savage is wholly superseded, and were it true, would not apply, because the savage brain of to-day might be degenerate from primitive conditions. For this reason, whether we consider savages degenerate or not, we cannot look upon the present relations between savages and nature as primitive and fundamental. They have, in general, secreted a psychic shell of tradition and super-

stition which, for the most part shuts them off, protects them, from the immediate tuition of nature in the midst of which they live. And, in just so far as their education consists in learning these secretions of human imagination instead of the realities of nature they remain fundamentally uneducated, or miseducated. Exactly the same applies to, so-called, civilized systems of education. When we consider that the Engis skull is "a well shaped averaged human skull," indicating an average European brain of the present; and when we realize that Nature has built it up to the level where civilization is possible, we begin to realize that a scheme of education which leaves the "Old Nurse" in the background, is likely to fail in laying the solid foundations of civilization. It is a system of elementary education with *really elementary education left out.*

Up to this point man has gathered a precarious livelihood by hunting, fishing and browsing. His life has been wholly a struggle *against* natural forces. Undoubtedly he has learned the advantage of obtaining assistance of his kind in attaining ends too difficult for individual effort, as a good many animals are known to do. Even wolves hunt in packs and keep up a difficult chase by relays. So that as the first great foundation of nature study we must have the social relations of man to man, the individual to society. Here we derive the very beginnings of unselfishness and altruism, the "consciousness of kind," about which we have learned so much of late. And still it is questionable whether this is really the basal thing or whether even this primitive human co-operation was not itself forced upon mankind, in part at least, by the dire necessities of his struggle for life. Were this view to prevail, we should be obliged to seek our lowest foundation strata in that terrible strife, chiefly with brute nature, through which the race struggled out obedience to the second great command; the first being: "Be fruitful and multiply, and replenish the earth;" and the second: "Subdue it, and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth."

Since this first command relates to human family and social relations, we may give it the benefit of the doubt for the present, calling it the first stratum in nature study foundations. Certainly the second command, "subdue," "have dominion," is given in the same breath and, if not belonging with the first, is evidently entitled to the second place. This period of utter enmity, tooth and nail, club and stone fight against nature for life, this period of pure savagery, was probably longer than all the other culture epochs combined. In accordance with doctrines of the "ascent of man" it gave him his fundamental humanity,

the crown of victory, won through endless conflicts of thousands of years, from which the human head rose—

"Bloody but unbowed"—

to receive it.

This period gave to man his bodily form with its suppleness, strength and endurance, his craftiness and native intelligence, his moral qualities, courage and indomitable will, the occasions and materials, at least, with which he could work out his social organization, and possibly some beginnings of religious reverence toward the more overwhelming phenomena about him. In many cases, this religious side came into dominance and a branch of the race swerved from the command and sunk into an imbecile worship of animals and even trees. A large branch even of the Aryan trunk suffered this decadence, but all these are wholly aside from the main line of human advance, terminal twigs left early far behind. Even the extermination of the huge mammoth, according to professor Shaler,[1] is probably "to be accounted among the brutal triumphs of mankind, perhaps the first of the long tale of destructions which he has inflicted on his fellow-creatures."

At whatever stage a babe first opens his eyes upon the world of action, whether animal, savage or civilized, or a mixture of all three, and whatever theories we may have on the subject, we are obliged to reckon with the fact that a young boy is a good deal of a savage to say the least. This savagery may be merely a logical consequence of lack in education and experience, coupled with an explosive ebullition of energy, or it may be due to direct inheritance from a savage ancestry. In either case, may not a rational pedagogy supply him with enemies with which he can fight a "good fight" rather than a bad one on his way to becoming a juvenile barbarian?

From abject savagery two momentous advances in nature study opened the way towards civilization: the one, *domestication of animals*, the other, *cultivation of the soil*. These great steps must have followed something like the sequence of a logical necessity. No important domestication of animals could have taken place, until man had arrived at his supremacy; no effective cultivation of the soil was possible, until he had obtained the assistance of the ox and horse. Prior to this, his flocks must have been wholly, as they have always been in part, but food for his fiercest enemies, and his crops would have been trampled into the earth.

It is interesting to note that the world over the dog was the first animal, as Shaler puts it, "made captive and friend for the sake of companionship rather than for any grosser

[1] Shaler: Domesticated Animals, p. 130.

profit." This may be claiming a good deal for primitive platonic friendship: for the first tamed dog must have been helpful, in following game, in capturing probably more than he ate, in giving warning of danger. And for the sake of nature study, it may be within bounds to imagine that the first wild puppy was brought by some savage hunter to his little boy, as a cat brings live mice to her kittens, that the boy became attached to it as a possession and companion and that the new-found friend first attracted serious attention by arousing the camp when threatened by danger at night, or possibly accompanying his father on a subsequent hunt, the boy took his pet along and thus gave this his first "Fido" an opportunity to demonstrate his worth for keen scent and speed.

It is altogether possible that this boy with his newly acquired helper went hunting on his own account and brought home game which neither alone could have caught; so that possibly by the play and plastic intelligence of a child was brought to man's attention the great truth that there are friends and allies in the animal kingdom; and this, Shaler considers on some accounts the most important step of the race toward civilization. A new relation to nature is thus revealed.

According to Shaler, again, human races fall into two divisions: "those that have tamed the horse and those that have not." "No other creature has been so inseparably associated with the great triumphs of our kind, whether won on the battle field or in the arts of peace." For thousands of years of primitive warfare it was as sure as gravitation that the side that commanded the strength of the horse should win. Here, again, it is entirely possible that some motherless colt became the companion of a child, was ridden in play, and thus the idea which has done so much to cast the die for Aryan conquest dawned in the plastic mind of youth.

The complete or partial domestication of practically all our important animal allies antedates authentic history. Brushing aside the fine spun cobwebs which would separate human art and science, the man or boy who first conceived the idea of taming the horse must be reckoned as the foremost biologist of his time, and should rank with the great geniuses who have since tamed steam (another boy) and electricity. But with their flocks and herds men must wander from place to place for pasture, *i. e.*, be homeless nomads, half civilized barbarians.

In point of its influence upon the stability of human society, and as forming the foundations of actual civilization, the step towards soil culture would seem to take precedence over all others. It was decisive for stable, social institutions. It meant indefinitely increased food supply, food variety and many other material resources. Since the fundamental necessities of life

must be secured before we can have higher things, it contained the prophecy of world commerces and, as well, of literatures, arts, philosophies and sciences. Even at the time, it indicated the presence of the intellectual and moral elements that are fundamental to human civilization. To plant and rear a few simple products proved that the men who did it had studied nature sufficiently to follow her methods as to seasons of seed time and harvest and location of habitat. It showed, most of all, that men had developed the courage to fight for their homes, at the same time giving them something worth fighting for, and the moral stamina to work for their daily bread and for that of their offspring. Many individuals at present are far below this moral threshold fundamental to civilized life. Contact with the soil and its plants, together with relations with domesticated animals already formed has thus furnished the great matrix of psychic evolution, the modeling material which even the sculptor requires to quicken his ideal, to steady and help the unfolding dream until step by step it becomes perfect. They have furnished in large part the material of opportunity and experiment by which man has shaped his larger dream from the simple provision of food for himself up to discovering favorable cultural conditions, which have made two blades grow where one grew before, and finally by selecting or originating better varieties of grain, fruit or flower to confer lasting benefits on the race; and this is one of the crowning triumphs of human altruism.

Recent investigations in Chaldea[1] indicate that 6,500 years B. C. the rich plains of the lower Tigris and Euphrates supported a stable agricultural civilization. The size of their cities and the advancement of their arts would point to perhaps three or four thousand years at least in addition as necessary for their development. Thales founded Greek astronomy about 600 B. C., and Ptolemy constructed his system about 150 A. D. De Candolle[2] gives a list of 44 species of plants which have been cultivated for more than 4,000 years. A number of others may be as ancient, but coming from countries without literatures, records of their cultivation are wholly lacking. Some knowledge of fire was an early possession of the race, dating, probably, far back into the ages of primitive savagery, but, important as it is, fire has no such fundamental relation to human life as the plants and animals which furnished man food, clothing, companionship and his closest associates of the chase, of war and of all the arts of peace.

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[1] Sayce: Babylonians and Assyrians. N. Y., 1899.

[2] De Candolle: Origin of Cultivated Plants. Appleton & Co., N. Y., 1895.

In a word, the fundamental relations to nature that have made civilization possible are all biological, domestication of animals, cultivation of plants. Those who insist on the fundamentality for nature study of astronomy or any of the other recent sciences on the ground that they are logically or historically first, are building their systems in mid-air.

In addition to the evidence already adduced it is interesting to note that the command to "have dominion" in the story of creation directly specifies "over every living thing," and goes on to name "herb" and tree, and fish and fowl and beast; and man was put into a garden "to dress and to keep it." And, finally, the first lesson given to man, and by the Creator himself, was not one in the "fundamental" science of astronomy or chemistry, or physics or even botany, but a lesson in zoölogy, an ideally practical lesson, in which the "Lord God brought every beast of the field and every fowl of the air to Adam to see what he would call them."

We find, thus, every sanction for making *biology*, the relation of man to the life about him the foundation of elementary nature study. Child study, experience of teachers and common sense all focus so strongly upon this that we might, in fact, have laid it down at the outset, were it not desirable to state the historico-evolutionary argument somewhat fully. Especially was this necessary on account of the number of plans in the field which leave it wholly out of account.

The next question is: What use are we to make of these biological foundations?

For ages untold man has existed as a savage whose command from on high was to "*subdue*" every living thing in the air, on the earth, in the waters. Shall our nature study courses then turn the child's savage passions loose to vent themselves in promiscuous destruction? This is not the only course indicated, if, indeed, it is indicated at all. The child enters the kindergarten at four or five. So far as the writer is able to judge a child of even two or three is capable of some degree of appreciation of the sufferings of an animal. While, if left to himself, he may seem to take pleasure in the lively reactions, at least, of an animal in pain (and the facts which have come to my attention would bear this interpretation rather than the usual one that the child delights in the pain itself), a very little wise pedagogy, coupled with a touch, if needed, of the practical physiology of pain (of the child himself) will suffice to bring him through this stage with lightning rapidity to where he takes evident delight in giving pleasure rather than pain to his animal associates. But this stage is probably earlier than the fourth year, and its successful passage should be largely

a matter of home nature study—the proper treatment of the pet kitten or dog.

If this work be done and relations of sympathetic interest in animal life be thus established in the home the early grades may develop the subject of taming animals and widening sympathetic relations with nature. The conduct of such a course presents a logical difficulty which should be pointed out.

The dog, horse, cow, goat, sheep, cat, fowl, pigeon, goose, duck, and so on, are the important animals domesticated by men. Hence the Herbartian pedagogue says: "study them," count their legs and their tails, examine their eyes, their ears, their hair, wool, and feathers, their toes, hoofs, teeth, and so on *ad nauseam et ad imbecilitatem* after the manner of the wooden "Naturkunde" of our German friends. But it cannot be emphasized too strongly that nothing of importance attaches to these animals themselves, much less to their various parts. The fundamental thing for nature study lies in their *relation to human interests*. Even the act and process of taming is only the outward sign of the inward human need that makes the effort to tame worth the while. For the country children the endless generations of colts and calves and lambs furnish the material for this real fundamental nature study and none of the animals need be brought to school. They should remain in their normal relations as the text-books from which the lessons are learned. There need be none of the sentimentality and, indeed, very little should be made of the negative side, prominent in the very names of the "Societies for the Prevention of Cruelty to Animals." The schools should become rather wholesome societies for the positive and rational promotion of animal comfort and happiness. Much more attention could well be paid to animal domestication on account of its deep historical significance and educational value. The way Alexander the Great tamed Bucephalus by human intelligence and tact might well be the ideal, in this work, of every child and the story as told by Plutarch[1] should be given a place in every course in nature study.

All animals thrive better and are so much more easily managed if rationally domesticated, that the schools would be conferring a material benefit while they are thus deepening the sympathies and fundamentally civilizing the youth of the country.

While children in the country are holding fast to these civilizing relations to their domesticated animals, they could join in helping to solve the wider problems of animal domes-

[1] Plutarch's lives. The story is quoted in full in Benjamin Ide Wheeler's Alexander the Great. Century Magazine, Nov. 1898, p. 12.

tication which we now pass to consider for children of both city and country.

No fundamental importance attaching to the particular animal, we would not have a "school horse" or a "school cow" or other animal kept by a city to make the rounds of the schools. The relation to the life and interests of the children, which alone is the essential thing, could not possibly be established by such a superficial and wholly perfunctory contact. The fundamental thing for nature study, education, and civilization, is that the children take part in actually taming animals whose domestication meets an important human need. We should hold all that has been won that is worth while holding, and especially push forward the advance of the race by winning from untamed nature everything that may prove of assistance to human progress, whether for material resource or the purposes of biological science or art or moral culture. The *worthwhileness* of the things we keep from the past is important. That is, the present is not to be crushed under a load of useless trumpery, ancient, cast-off and outgrown armors or moulted shells. If the individual be obliged to work through all the experiments of the past he will have no energy to assist in the advance of the present. There must be, therefore, a judicious "forgetting of those things which are behind" in order to an efficient "reaching forth unto those things which are before." In other words, "prove all things; hold fast that which is good," and "press on."

Thus the crest of this wave of advance, in science, in art, in all human progress, is the most interesting and inspiring thing in the world. This crest was once the taming of the dog, then, possibly, the sheep or cow, and finally the horse. But all these conquests have been won from "untamed nature," and are submerged under an almost, if not quite, geological ocean of human progress.

I have said that very possibly the inception of these advances, the first leaping up into these wave crests, was accomplished by the plastic intelligence of childhood or youth. Certainly the twelve-year-old Alexander leaped the crest of the wave with Bucephalus ahead of the heavy adult conservatism of Philip and all his royal grooms.

For the most part, at least, the earth can be said to have been *subdued*, and thus the first part of the command has been obeyed. Obedience to but an infinitesimal part of the second part "have dominion over every living thing that moveth upon the earth" has been attained. Man has been trifling with this command long enough. He has been saying in effect, "Oh, well, Lord, of course we wish to obey you, but you don't mean this infinite swarm of insects, this army of free birds of the air,

all these disgusting and good-for-nothing worms and snails, and these wretched microbes that you have created too small to see." But the command is very specific. Science has explored land and sea, and has invented names for about 300,000 species of animals and about 200,000 species of plants. De Candolle considers 247 species as constituting a fairly complete treatment on the side of domestication of plants. Since he does not include flowers of any sort, even the rose, lily or lotus, we may do well to use Shaler's estimate of "about 1,000 plants," whose products are found in commerce, as representing the number over which man's patrial dominion extends. His own statement, however, giving "near a hundred animals" as the number of species that we have brought into this relation, is altogether too small, since we could easily name five hundred species of food fishes alone, the world over. A liberal estimate, then, is 1,000 species, each, of animals and plants with which mankind has come into more or less useful relations. According to these figures we have begun to solve, up to the present, about one two-hundred and fiftieth of our problem. This may be the easiest part, and when we consider that we are daily learning new facts about our most ancient animal and plant subjects, and when we think, further, that estimates place the probable number of insect species alone at 10,000,000, and that none of the great tropical regions have been thoroughly explored botanically, it may be within bounds to say that the race has worked out one-thousandth part of its destiny in this direction. And we may be sure that a polysyllabic binomial will not stand muster at the bar of an omniscient examiner who has set dominion over nature as the task to be learned.

We give these rough estimates for general encouragement, for the most interesting and inspiring thing in the world is to find out and know something that no one else has ever been able to discover, and in this infinite field, so soon as we leave the over-head-deep beaten ruts of dead museum methods and imbecile name-learning, when we turn toward the side of ever-changing life and action, any child may daily discover things that possibly no one else knows.

The present crest of this great wave of human control over living nature has to do with gaining dominion over the bacteria, which are causing years of sickness and the premature death before the age of forty of about half the people of the world, and over the hosts of insects which it is estimated are annually destroying half the products of our soil. With the bacteria the school children cannot do much at present, although the problem with reference to their control is on the whole simple and they should be given a clear conception of it.

To control the insects we stand in the same great need to-day

of extending practical domestication over our insectivorous animals that presented itself to prehistoric man for the taming of the horse. To practically tame, to learn to treat with care and humanity according to their value to man, many of our birds, our bats, our toads, frogs, newts, and many of our fishes, which will enable us to adequately utilize the beneficent forces in nature represented by these forms, is a great work which the children of our schools will tumble over one another to do as soon as they realize its importance. For all but the most densely populated cities, and later it might enter even there, this should form a deep and fundamentally important part of all nature study courses. And there need be no exacting strain about it on either teachers or pupils, but just the easy, natural, fundamental relation of sympathy and good-fellowship fundamental to civilized as distinguished from savage life. And in all this work with the animals indicated above the children of the land can feel that they are pressing forward the crest of the wave of human advance into dominion over, and utilization of, untamed nature to meet the greatest human need of the present.

Sentimentality has no place in nature study and may be avoided by holding the reasonable human value always predominant. A good deal is being said about nature worship being fundamental; "we must have the normal savage, before the truly civilized," etc., but it is entirely reasonable to hold that all these savage nature worships and fears that we now are able to learn anything about are matters of very recent growth, mere terminal dementias developed in an abnormal individual or in a decadent racial stock and thus have nothing to do, except to stand as scarecrows along the line of march, with the fundamental course of human advancement. Certainly a thoroughly healthy babe holds out his arms for the moon, dances in joy before the sunrise, takes snakes and toads in his hands and kisses them as he does flowers and birds, throws his arms about the neck—hale fellow well met—of the first big black dog he sees, and even screams and claps his hands with delight before the wildest displays of winds and lightnings. Of course, hysteria is contagious and the scream, or even the look of fear may leave a deep imprint on the plastic brain, which, long after the circumstance is forgotten, may be unearthed and exploited as a real psychological fossil. The great fact with reference to the brain which bears upon this point certainly is that this organ in man is specialized toward most perfect plasticity and educability. It carries not even enough ballast from the past, to hold it right side up at first. Laden with only the merest vanishings of animal instincts, the babe is born a human being, and this is coming to be recognized as the fundamental distinction between the human and the brute.

Another fundamental safeguard against sentimentality is supplied by those things in nature against which it is necessary for man to fight. It is immaterial whether we accept the evolutionary theory that deep instincts survive from the ancient struggle for life, or hold that the will to fight arises anew in each generation out of hostile experiences with nature. The fact remains that life is still in large part a struggle, and a rational nature study may well lay down as early as practicable the main lines along which the fight for human life and happiness is laid. Then, if there really are "savage instincts," they may exhaust themselves on the enemies of the race rather than upon man's best friends. There is plenty to fight a good fight against from the microbes of filth, insect pests, the vermin of fields and homes, including the English sparrow, up to individuals of their own species who develop unsocial and criminal propensities.

What has been said in favor of the broadening of human sympathies by domestication of animals should not be construed to argue against a rational indulgence in hunting and fishing, but the course should raise these wholesome sports above the level of savagery. It should aim to give practical instruction as to the breeding seasons and the natural precautions necessary to avoid exterminating our valuable game species. By thus teaching the laws of nature we might make it possible for any closed neighborhood to have its woods full of game and its waters swarming with fishes.

Of course children in cities, and to some extent in the country as well, have access to menageries and zoölogical gardens, and while such opportunities should be utilized to stimulate and broaden interest, this cannot form a very fundamental part of a nature study course, because the necessary relations between the animals and children cannot often be established. Seeing things and drawing proper conclusions does not begin to become fundamental nature study until they touch the well-springs of action in a child. And this, I repeat, is the essential thing. City children often have animal pets. If the pet cat, dog or bird be brought to school, it must be the relation between the animal and child that should form the center of interest, and we can relegate to the waste-basket all the dull business which tells us to get down on all fours and crawl about the floor (the children have passed beyond all that by the eighteenth month at latest), to count the legs and ears and toes, and we may leave all matters of comparative anatomy to the premedical course in college.

We have attempted to outline the fundamentals of animal nature study at some length, because animal relations come first in the history of the race and in the interests of the child. In

passing to discuss the fundamental considerations in plant study I will present my views very briefly, leaving the reader to supply the argument, since it is essentially similar in the two cases.

The age at which a child can first be brought into educational relations with plants largely remains for modern child study to determine. A babe of a year may show great delight in the colors and fragrance of flowers. At little more than two he may manifest a passion for planting seeds, as well as sticks and stones, for picking flowers and berries, which might call to mind the young beavers building dams with parlor furniture, were it not clearly a matter of imitation and suggestion. Probably at three or four some beginnings of intelligent interest in planting and raising simple things can be developed. Some reports have come from kindergartens where it was stated to be impossible to do this with the children at four and five, but in these cases they all planted their seeds in the same large box. With individual pots, the result would probably have been different.

At six, at any rate, *i. e.*, in the first year of primary school, children, even, who have had no previous training or home encouragement, are ready to begin *competitive rearing of plants*. No one could have observed this simple experiment as carried on in one of the Worcester schools[1] without being convinced of its value. In essence it is the great fundamental lesson which necessarily preceded civilization; and it may well be, either by logical necessity, or on the theory of inherited impulses, fundamentally essential to the deepest civilization of the individual. In a word, the work consisted in distributing sometime in March or April an equal number of seeds from the same package to as many children in a class as wish to enter the game. The children take them home to plant themselves. Each child promises to take the sole care of the plants, and to bring in his result, whatever it may be, at the end of the term. Prizes have been offered, but this is not an essential. Never mind about any hard names, cotyledons or integuments, or plumules or radicals or root-hairs. All these details of technical botany can be left to the college, or at any rate, to the high school. You have spread the net which is to land your child on the shores of civilization. Do not frighten him away from it. You have given lesson enough for one term. To raise any plant *best* is lesson enough for a man to work on all his life,—the lesson the race has scarcely more than begun to learn.

Here again we may encounter the wooden method which maintains that we must plant beans and corn, and again it cannot be too emphatically reiterated that it is the human relation, the feeling of the child toward the plant, not any specific plant,

[1] Upsala Street School, Mary C. Henry, Principal.

which is the fundamental thing. In a region where the main human interests and values center about raising corn, beans and wheat it might be well during one or two years to let the children try raising these plants to beat anything ever seen in the township; but these things not lying as close to the lives of the children in a large city, I have chosen, thus far, easily raised flowers which could be made to bloom between April first and June tenth.

Beginning, as we must, with whole schools full of children who have never planted a seed, we must give the easiest possible things to rear to all the grades. Later we may establish a graded series of plants progressively more and more difficult to manage, beginning with nasturtiums and bachelor's buttons and ending with begonias, carnations or roses.

By making this work competitive, we scatter a whole handful of fundamental elements into it. It becomes a lively game, and games are the life of childhood, and in this play the children must use the sun itself and mother earth and air and water, the four primordial elements. It typifies on one of the higher planes the fundamental struggle for existence. This is not a mere mastery of superficial book knowledge, the relation of which to success in life children seldom appreciate. Here is a mastery of real nature, and it would seem from their sustained enthusiasm that the children sensed the idea: "if I can succeed in this I can succeed in life itself." Finally, whatever we try to do really well always becomes interesting. Unless we do put this mental and moral effort into it, we can get no reaction of pleasure and satisfaction from our work. Without this element the rearing of their plants might become the common drudgery of a child set to work in the garden as a punishment.. With it the work comes to be loved for its own sake and this love flows out and prompts to similar activities wherever opportunity offers.

The question naturally arises, how many children choose to go into such a game? and I may anticipate it by saying that in a school of about 400 pupils, all but two or three took the seeds the first year. During the two subsequent years every child in all grades took them, and with an eagerness that was in some cases pathetic.

At the end of the term the plants are all brought into the general flower show, and judges from outside the school make the awards. I confess to having had some misgivings, on account of the prizes, that there might be heartburnings, but nothing of the sort has been observed. A happier school I have never seen than this one on the three annual flower shows. It is true, as I had hoped it would be, that each child is so well

satisfied with the great lesson he has learned that the prize becomes a matter of comparative insignificance.

This lesson I consider fundamental to plant nature study; and, it should be remarked, it is fundamental to life. To grasp the idea of doing one such thing best. To learn how to throw conditions about his little plant that will cause it to grow *best* is the same idea at bottom as that of learning to surround even a human life that may be entrusted to his care, with such conditions as will insure the best possible growth, not only of body, but of mind and soul as well.

While just this competitive work is the fundamental upon which I wish to insist, during the three years of its progress it has flowed out underneath a great deal of the life of the community. By the spontaneous initiative of the pupils, a school garden has been made with beds for each grade, and the children have expressed the wish to learn how to cultivate a number of various garden vegetables and flowers on a larger scale. They have succeeded admirably so far, and have carried their flowers in quantities to a hospital near by, and have sold vegetables enough from their little plots to more than pay for their seeds. The children have also brought in and planted in their school yard a collection of wild shrubs calculated to attract birds. A better result still has been the establishment of home gardens for flowers, fruits and vegetables. The best result of all, as I have been informed by a long-time resident of the neighborhood, is that juvenile garden-vandalism, which heretofore had made life a burden, has wholly ceased.

If we are to have a civilization, we must not neglect to lay its stable foundations. If it be true, as professor Shaler maintains, that city bred people are in danger of losing those "essentials of character" gained from daily association and control of domestic animals, which he thinks helpful in preventing the country bred from "becoming savages of the lower sort under circumstances of excitement," how much more certain is it that we are raising up an army of thieves, tramps and general incapables, if we allow boys to grow up who have never planted a seed.

It has been my own practice for several years to hire tramps to work in my garden. I need not tell here of the number of things that have been destroyed, because they generally had no knowledge of the commonest garden plants. I have got them to come simply to ask them this question: Did you ever plant a seed of any kind and raise a plant? In all but one case in over thirty the answer has been, "No, Sir." The subject deserves much more thorough investigation, but such facts as I have, seem to support the view that we are facing here an absence of civilization-foundations of character. Under some

temporary stress of labor conditions the man caves in, becoming practically a wandering nomad. And the annals of crimes perpetrated by this class might enable us to follow him still lower.

To catalogue a few of the results in conclusion, a fundamental nature study of plants should result in making the schoolhouse the most beautiful spot possible solely by the work of the pupils. It should surround each home with all the necessaries and luxuries obtainable from the ground at command, and, above all, give to each child sufficient knowledge of the forces and resources of living nature, so that, if occasion require, he can make his living from the soil by actually rearing animals and plants.

For the country to infuse hope and life and interest enough to lift the work above the plane of slave lobor will mean moral, mental and physical health and prosperity and will do more than all else to stem the fatal tide cityward. Socialogical studies are beginning to show that the strength and virility of even city life comes in from the country. The first generation from the country become men of responsible position and skilled laborers; the second, unskilled laborers; the third, if there is any, fill the slums and swell the ranks of tramps and vagabonds. In the artificial, factory, tenement-house life of our cities we should cling to, these fundamental relations to nature as the drowning man clings to his plank.

The principle, commonly accepted, that every boy should learn a trade, important as it is, is superficial compared with these deeper biological foundations which so immediately support the whole structure of our civilization and even human life itself.

Some of the more formally educational foundations of nature study may be presented in a subsequent article.

LITERATURE.

Knowledge and Practice. PROF. CHARLES SEDGWICK MINOT. The Yale University Commencement Address, June 29, 1899. Science, July 7, 1899.

The address treats of some of the urgent problems in medical education. Science is the basis of medicine. A great many practitioners still draw a sharp line between "theoretical" and "practical" doctors. Those who think this distinction are, of course, "practical" men, and they are guilty of a triple error: first, that scientific is theoretical; second, that theoretical is impractical; third, that practical is superior to theoretical. Research is emphasized as the leading factor in medical progress. In 1879 Koch introduced the method of solid cultures; in 1882 he published his monograph announcing the discovery of the bacillus of tuberculosis. In 1884 came Löffler's paper on the bacillus of diphtheria. In 1891 appeared Councilman's account of the amœba of dysentery. At the International Medical Congress in 1893 Roux described the use of antitoxine in diphtheria, and about the same time McFadyean secured recognition for the value of mallein in the diagnosis of glanders. In 1896 came Vidal's reaction for identifying the germs of typhoid fever. Dramatic proof of the value of science and the laboratory method. There is a demand for laboratories in connection with every hospital. There is nothing to distinguish the scientific method from the method of every-day life except its precision. It is not a difference in kind or quality, but a quantitative difference. It is like all other search after truth, observation and reasoning. The medical course should admit more scientific training. But the course is already crowded, and the four years should not be lengthened. The only way out is to introduce the elective system on a large scale into the fourth and perhaps third year. A series of these electives should be made for advanced work in scientific subjects such as anatomy, embryology, physiology, pathology, pharmacology, bacteriology. Required studies in medicine should be reduced to the minimum, and numerous electives provided for every year of study. Among these pro-electives should be psychology in its medical aspects. The elective system is the educational answer to the tendency towards specialization in practice. Minot believes that we have no choice as to its adoption.

An earnest plea is made for the study of biology by medical men. There should be a greater inculcation of the comparative method, to which the development of biological science is mainly due. The adoption of the comparative method in medical research will be the greatest advance in medicine which our time will know. A veterinary hospital in intimate association with the school of human medicine is earnestly desired. A large part of anatomy is to the student sheer memorizing and without intellectual value. The number of lectures is too great. "Knowledge lives in the laboratory; when it is dead we bury it, decently, in a book. Now real knowledge is what the medical practitioner needs, the personal mental image of things seen, felt and heard; he needs to establish a short circuit between sensations and the true psychic concept, but if you train him to interpolate books

you are likely to make the circuit so long that there will be no true concept at the end of such a resistance path."

ARTHUR ALLIN.

Société libre d' études pédagogiques sur la psychologie de l'enfant. Par F. BUISSON, *Manuel Général de l'Instruction Primaire.* Paris, 4 et 18 November, 1899. pp. 477-478 and 509-511.

The numerous American friends of the child study movement will be interested to learn of the National Society for Child Study recently instituted in France. The organization is the result of a combination of forces—of university interests as represented by Professor Buisson, Compayré and Chabot; of interests in defectives represented by Mailloux; as well as of elementary school interests represented by Kahn and numerous teachers and principals of elementary schools and normal schools in Paris and in the provinces.

The purposes of the society, as stated in the constitution, are to facilitate among its members the individual and collective study of the physical and psychical development of children; to discuss and publish such investigations; and to apply the results to the work of education. The constitution provides for a central organization and local circles which shall be under the general supervision of the National Society, much after the manner of the British Child Study Association. The membership fee is fixed at two francs, and the constitution provides that at least a third of the officers must be women. The president can only be re-elected after three years, but the other officers are eligible for re-election. A meeting of the National Society must be held at least once a year.

At the preliminary meeting held in Paris November the ninth, 183 persons joined the National Society, including such well-known names as Binet, Buisson, Compayré, Egger, Chabot, Kahn, Phillippe, Galtier-Boissiére, Dreyfus-Brisac, Chauvelon, Mme. Kergomard, Mlle. Salomon, and Auguste Mailloux. The movement is headed by Professor Ferdinand Buisson, in charge of the department of pedagogy in the University of Paris, and it includes in its membership a wide range of psychological and pedagogical interests.

WILL S. MONROE.

Psychologie der Kindheit. Von FREDERICK TRACY. *Uebersetzt*, von J. STIMPFL. Leipzig, Ernst Wunderlich, 1899. pp. 158.

Tracy's Psychology of Childhood is too well known to American students of children to require review in its translated form. But the introduction by the translator is such a succinct account of the American child study movement that it deserves more than passing reference. Few Germans have followed the investigations in the child study field in our country with deeper interest than Dr. Stimpfl, as the introduction to this book conclusively shows. The labors of G. Stanley Hall, Wm. H. Burnham, Earl Barnes, Elmer E. Brown, F. B. Dresslar, E. Harlow Russell, C. C. Van Liew, Miss Lillie Williams and others are discussed with insight and appreciation. The view taken by Dr. Stimpfl, as to the utility of child study, is the same as that held by Professor Earl Barnes and other American teachers,—that its chief value is pedagogic. Professor Tracy has written an additional chapter for the German edition of his book on the æsthetic, moral and religious ideas of children. This chapter will doubtless appear in subsequent American editions of his book. The cuts which illustrate this chapter are taken from Sully's studies of childhood, from Dr. Luken's study of children's drawings in the *Pedagogical Seminary*, and several have been reproduced from the translator's collection of children's spontaneous drawings. WILL S. MONROE.

The care of the baby. By J. P. CROZER GRIFFITH, M. D. Philadelphia, W. B. Saunders, 1899. pp. 404. Price, $1.50.

Students of childhood, and especially those interested in the physical capacity of child life, will find this book most helpful. The author has aimed to write a reliable guide for the care of young children in sickness and in health. In the opening chapter—"Before the baby comes"—he gives some sensible hints on pre-natal conditions; the second chapter presents the characteristic of a healthy baby; the third chapter discusses growth, and presents a useful chart for the measurement of the infant's weight; chapters are given to the toilet, clothes, and food of the baby, and to sleep and exercise. On the subject of sleep the author gives some sound advice, altogether too little heeded by parents. Children, he insists, should be trained to great regularity in the matter of hours of sleep; and during the growing periods of the child, there should be an abundance of sleep.

Perhaps the most useful chapter in the book is that which discusses the sick baby. It contains descriptions of the symptoms by which one may know that disease is present; concise résumés of the most common diseases of infancy; and directions for the management of various accidents, including, among others, drowning and the swallowing of poisons. In the appendix are grouped a somewhat heterogeneous collection of directions on dietary and remedies.

Although written by a clinical professor of diseases of children, the style is simple and the subject matter within the comprehension of the average teacher. Considering the wide spread pedagogic ignorance of the subjects treated, the book ought to have a large sale. It is well printed and illustrated, and has an excellent index.

WILL S. MONROE.

The first school year: a course of study and selection of teaching material arranged by months and correlated. By ANNA B. THOMAS. Published by the State Normal School, California, Penn'a, 1898. pp. 109.

As stated by the author, "the aim in the preparation of this book has been to aid primary teachers in the selection and arrangement of lesson materials and to offer some suggestions as to method of teaching." Correlation, according to Miss Thomas, should be along the lines of nature study, literature and history, number, language, and the arts of drawing and music. During the month of September she provides for the study of the apple, of maple, oak and horse-chestnut leaves and of the golden rod. The reading for that month includes "The sleeping apple," "The little maple leaves," "The anxious leaf," "Little golden rod," and "the origin of the golden rod and aster." Three poems are memorized—"Lady golden rod," "How the leaves came down," and "Sunny golden rod." Provision is made for little problems involving the numbers two and three growing out of the nature lessons; there is language drill and expression of the thoughts developed in the fruit, flower, and leaf studies, and the singing of simple songs that are also related to the nature work.

This little book must prove helpful to primary teachers generally. The selections for reading and singing are for the most part well made, and the pedagogic suggestions for the development of the different topics are sane and helpful. In all such work, however, one is led to question the extent to which such fixed correlations should be carried with little children.

WILL S. MONROE.

Educational Review: a magazine of the science and art of education, and review of current educational literature and events. Edited by WILLIAM K. HILL. London: office of the Educational Review. Published monthly since January, 1899. Annual subscription, 5 shillings.

The publication of a really professional educational review in England comes as something of a surprise, when one recalls that such publications in Great Britain (excepting, perhaps, the *Journal of Education*) have been little more than trade journals. America has had her share of cheap educational publications, but she has also had a half-dozen periodicals of high quality. Mr. William K. Hill, who is not unknown to American students of education, has placed all British students and practitioners of education under lasting obligations to him for the high character of the new *Educational Review* which he has been editing since the first of the year.

The editor has associated with him a strong corps of British educational writers, including such well known names as James Sully, C. Lloyd Morgan, Foster Watson, S. S. Laurie, H. Courthope Bowen, Francis Storr, John Russell, Henry Holman, Elizabeth P. Hughes, Dorothea Beale and Herbert B. Garrod. Eight numbers have already appeared, and the range and character of the articles commend the new publication to the American as well as to the British teaching public. Professor Morgan's excellent presentation of the claims of psychology for teachers is an admirable reply to the small chorus of writers in popular magazines who are declaiming so loudly against psychology. Professor Foster Watson, who is one of the most promising English writers on the history of education, has written for the August number a most readable article on some of the desirable reprints of old educational books.

Child study has not been neglected in the range of topics covered by the new review, and in the April issue Miss Mary Dendy has a sensible article on the individuality of the child. The reviews of pedagogical books have thus far been meager (and unsigned), but the résumés of periodical literature are admirably done, better, in fact, than in any other educational review with which the writer is familiar, and these are done by the editor himself. Indeed, these summaries of contemporary educational literature are well worth the subscription price of the magazine. WILL S. MONROE.

New York teacher's monographs: geography number. Prepared by CLARENCE E. MELENEY. New York: Teacher's Monograph Co., 1899. pp. 130.

The twenty-one articles on the teaching of geography are published for "the presentation of information concerning the course of study for the public schools of Greater New York." The articles are for the most part reprints, and, averaging as they do, little more than six pages each, they are too brief to be of much practical value to teachers. The volume opens with three pages on the educational value of geography by Dr. William T. Harris, extracted from the report of the committee of fifteen. There are short articles by Professor Davis of Harvard University, Professor Hodge of the Teachers' College, and Mr. Alex. E. Frye. These are as valuable as any in the book. The contributions by Professor McMurry and Superintendent Balliet, as well as Mr. Meleney's own contributions, are to the point and helpful so far as they go; but an attempt has apparently been made to represent too many contributors within a space so limited. The articles are scrappy. One notes also the the omission of bibliographic references for teachers. So many good books are now published as aids in geog-

raphic instruction that teachers might have been materially aided in having called to their attention some of the standard reference books.

WILL S. MONROE.

The Association Review: an educational magazine published [bi-monthly] by the American Association to Promote the Teaching of Speech to the Deaf. Edited by FRANK W. BOOTH. Philadelphia, October and December, 1899. Vol. I. Price, $2.50 a year.

A very active educational organization is the American Association to Promote the Teaching of Speech to the Deaf. Its sixth summer meeting held the last week of June at Northampton, Mass., was one of the most interesting of the long line of summer conventions. It was decided at this meeting that the life and future usefulness of the association required some medium of expression. The establishment of a periodical, it was thought, would strengthen the work and strengthen the hands of those doing the work all over the world. The primary purpose of the association is to teach speech to deaf children; "yet," notes the editor in the initial article, "this specific purpose will in no wise limit the field of the magazine, for it is recognized that teachers of the deaf must be something more than teachers of articulation, more than instructors of a special branch or of a special subject. Teachers they must be, trained and skilled, specialists if you will, in the part or parts of the work they are called upon to do; but they must be also, with all the rest and above all the rest, educators."

There is no reason why the deaf educators should not measure up to the ideal outlined by Mr. Booth. They number many exceptionally bright minds, including such well-known names as Alexander Graham Bell, Sarah Fuller, Caroline A. Yale, A. L. E. Crouter, Joseph C. Gordon *et al.* The two numbers already published promise well. The number for October contains the following noteworthy articles: "The teacher and the State," by Professor John M. Tyler; "University experiences" [of a deaf boy], by A. Lincoln Fechheimer; "Kindergarten work in schools for the deaf," by Edward C. Rider; "Pictures and how to use them," Florence C. McDowell; a sketch of the life of Gardiner Greene Hubbard, by Gertrude M. Hubbard; an account of the sixth summer meeting with abstracts of addresses by Frank B. Sanborn, Supt. J. H. Carfrey, President A. Clark Seeley, Alexander Graham Bell, R. Mathison, and Miss Harriet B. Rogers; also accounts of the deaf department of the meeting of the National Educational Association at Los Angeles, and of the conference of the British National Association of Teachers of the Deaf.

The December number of the *Review* is below the October number in the quality of its articles. The original articles are so brief at times as to be scrappy. A review department is added to the December number. But the reviews are for the most part of institutional reports, and consist more of quotations than of comments. Better edited reviews, and these signed, would add materially to the value of the magazine. But the *Association Review* is decidedly superior to any publication representing the interests of the deaf, and it ought to appeal to a wide range of lay readers.

WILL S. MONROE.

Perhaps one of the most noticeable features of the *Addresses and Proceedings of the National Educational Association* at Los Angeles, California, July 11-14, 1899, is the amount of attention given to the subject of libraries and their relations to the school, reading lists, supplementary reading, etc. Without doubt the best paper on this subject is the one by Mr. John C. Dana, of the Springfield Massachusetts Library, entitled "The Librarian's Spirit and Methods in Working with the Schools" (515-527). If Mr. Dana's model librarian were not

so rare, the connection between library and school might be speedily settled, but unfortunately, at least in the East, he is all too rare. How many of us know the librarian who "realizes that books are tools, are not sacred things, and find their best end in being worn out by reasonable service," "is fond of children, is patient with them," "has no special card for teachers,—can lend to any person six or sixty books as easily as one, and a special card makes a distinction which by those other than teachers may be thought invidious," "has a teachers' corner in the library, and keeps there, with special books for teachers, copies of the latest pedagogical books and journals, and lends them," "always works in sympathy, and with the full knowledge of, the superintendent, and in accordance with his suggestions and wishes," "encourages teachers to borrow from the library for a few weeks, or a term," "is glad that they (teachers) make complaints, and is not disturbed by them," "discovers that their demands are generally not so much in the spirit of fault-finding as the desire to get out of the library all that can possibly be got," "encourages, rather than discourages, the asking spirit in all the teachers with whom she comes in contact"?

If the librarians throughout the country are as anxious to make their books of service to teachers and pupils, as many of these reports would seem to indicate, there would be less occasion than there seems to be for so frequently calling public attention to the subject. Mr. Dana at Springfield has undoubtedly solved the problem, and if the same liberality prevailed in more institutions in the East there would be less complaint on the part of both librarians and teachers.

One weak point in the administration of libraries is the class of men appointed on the Board of Trustees. Too often the board is made up of retired politicians or busy professional men, who have neither time nor inclination to study the needs of the public. Their chief function seems to be to see that the building is kept in repair, that the books are safely guarded, and that the appropriations are not exceeded, leaving the practical working of the library entirely in the hands of the librarian. In cases where the librarian has the true spirit this works very well; but assuming that he has not, how often do the directors interfere, or in how many cases do they feel the pulse of the reading public? Given a library, with however few books, where all are made to feel at home—there will be no lack of interest on the part of the children.

The mere fact that so important a body as the N. E. A. has taken up this question in earnest is a forerunner of better things.

LOUIS N. WILSON.

The Psychology of Religion: An Empirical Study of the Growth of Religious Consciousness. By EDWIN DILLER STARBUCK, Ph. D. Preface by Professor William James. Contemporary Science Series. London, Walter Scott, Ltd.; New York, Charles Scribner's Sons, 1899. pp. 420. An inferior index.

At last we have the irenicon of Religion and Science. The temper and even the explicit aim of this work are conciliatory. The author would carry over into the study of the facts of the religious consciousness the methods of inductive science. In other words, the religious consciousness is one aspect of the total consciousness, and, as such, is subject to psychological interpretation. There is nothing so startling in this point of view as the author seems to think. Dr. Starbuck really does not stand isolated upon a frowning promontory far out in a vast and unknown sea. Closer acquaintance with the methods in some theological schools would have given him a sense of community which

he seems now to lack. Even theology which he naïvely assures us have been given up to "introspection, intuition, rational analysis, and definition," has some professors who have hitched their wagons to the star of induction. One well known teacher of Systematic Theology in this country begins his lectures with the remark: "Gentlemen, at present there is no dogmatic theology; the returns have not yet come in for system-building." This is not to confuse Dr. Starbuck's particular work with that of any other person or class of persons, but merely to indicate that the inductive spirit is already at work in religious circles, and has even found its way into the consideration of the *summa philosophia* itself.

Specifically Dr. Starbuck attempts to make a statistical study of the growth of the religious consciousness. The present work is an amplification of two papers, 'A Study of Conversion' and 'Some Aspects of Religious Growth,' produced while Dr. Starbuck was a student in Clark University and published in the *American Journal of Psychology* in 1897, January and October, respectively. Some additions of material have been made.

The material for statistical tables and critical discussion was obtained by the questionnaire method. It really consists of religious autobiographies of a few hundred persons—all (with insignificant exceptions) American Protestants of rather more than average intelligence. Conclusions, therefore, are applicable only to the religious consciousness of American Protestants.

The work falls into three parts. I, Conversion; II, Lines of Religious Growth not involving Conversion; III, Comparison of the Lines of Growth with and without Conversion. Some of the topics discussed are: The Age of Conversion, The Mental and Bodily Affections immediately Accompanying Conversion, The Conscious and Sub-Conscious Elements in Conversion, Conversion as a Normal Human Experience, Abnormal Aspects of Conversion; The Religion of Childhood, Adolescence (several aspects), Adult Life (Beliefs, Religious Feelings, Motives and Purposes); A General View of the Line of Religious Growth. Finally, a chapter of Educational Inferences is appended. Upon all these and other topics, much important and suggestive material is brought together. If Psychology, as has been said, wittily enough, is the "science of what every one knew before," then Dr. Starbuck has made a considerable contribution—but largely in the way of illustration it seems to the writer. The tables and percentages, in spite of Professor James's amiable and expiatory preface, do not seem to have other significance. Indeed that seems to be the real meaning of Professor James's somewhat misty statement.

On the whole, the interpretative phase of the work is disappointing. There is a singular lack of penetrating criticism. This is apparent throughout. Specific examples are the treatment of Faith, the Abnormal Aspects of Conversion and the Relation of Sex and Religion. For instance, apropos of the last, the author tells us that all his respondents regarded the "reproductive instinct as a hindrance to spiritual life;" but he says nothing about their specific conceptions of spiritual life, nor does he tell us what part the idea of the essential uncleanness of the sex instinct held in the thinking of the particular individual.

This lack of critical acumen is made more apparent by the garrulous prolixity of the work. The subject matter presented does not warrant such a thick volume. No concession is made to the reader's intelligence: *E. g.*, p. 408, where the author solemnly confesses that his wares in the way of pedagogical wisdom are less than he had expected. Such confidences are charming, but they are unnecessary.

Another blemish is the tedious pedestrianism of style. One wearies

of invertebrate sprawlings and longs for an occasional clear-cut authoritative utterance. Such grotesque figures as infest the book, *e. g.*, of the child drinking in habits (p. 292), and such solecisms as the one at the bottom of the same page are not excusable even in a scientific work.

It should be noted that the title of the book is a misnomer. A study of the growth of the religious consciousnesss of a limited number of American Protestants is not *The* Psychology of Religion. Offhand, one would say: What of the psychology of religious dogmas, of the transcendent, of the growth (ontogenetic) of religious ideas, etc.? But as the author partially corrects the title in a sub-title, and frankly states his limited purpose in his preface, it is but fair to assume that the publishers are responsible for the pretentious caption.

The book is poor in references to collateral literature. Dr. Starbuck ignores the work of his predecessor in this field, Dr. Leuba (A Study in the Psychology of Religious Phenomena, *American Journal of Psychology* [Vol. VII], April, 1896)—an omission that Professor James's notice in his preface does not excuse. Dr. Starbuck's reputation for originality would not have suffered by recognition of this work; and on the other hand, a probably groundless suspicion of his candor would have been obviated. W. S. SMALL.

Die Entwickelung des sozialen Bewusstseins der Kinder. Von WILL S. MONROE, Professor der Psychologie und Pädagogik an dem Staatlichen Lehrerinnen-Seminar zu Westfield (Mass.), U. S. A. *Sammlung von Abhandlungen aus dem Gebiete der Pädagogischen Psychologie und Physiologie.* Herausg. von H. Schiller und Th. Ziehen, III Band, 2 Heft, Berlin, 1899. pp. 88.

In the present volume in the series of monographs edited by Professors Schiller and Ziehen, Mr. Monroe has attempted to trace the development of the social sense from the animal, through primitive man, to the child. As he shows in his introduction, germs of the social sense-instincts and feelings have their roots low down in the species. With primitive man social activities of the individual arise unconsciously, and their prevailing forms are established by unconscious adaptation even before the social mind begins to reflect on them.

And the acquisition of social interests and institutions by the race are constantly recapitulated in the child. He not only inherits social aptitudes and tendencies, but is born into a world of social forces, upon which he reacts from the hour of his birth. What these social forces are may be indicated by the chapter headings in Mr. Monroe's book: Influence of the social environment—companions, occupations, societies; Social utility of play—toys and games; Social content of school instruction—singing, history, geography; Social force of proprietary notions—money sense and rights; Discipline as a social factor—class responsibility *esprit de corps*, punishments; Social suggestibility of emotional states—superstitions and fears.

The facts employed by the author, in this study of the social side of child life, have been gleaned from the statistical study of about five thousand Massachusetts school children. Each of the seven chapters in the book ends with a bibliography of cognate references.

Psychology and Life. By HUGO MÜNSTERBERG, Professor of Psychology, Harvard University. Boston and New York, Houghton, Mifflin & Co.

This work, although consisting of six essays, each of which may be understood alone without reference to the others, is to be regarded as a unity, each individual essay setting forth from a different standpoint

the fundamental conception of the whole. In the words of the preface "one fundamental thought controls the book," the chief aim being "the separation of the conceptions of psychology from the conceptions of real life," the limitation of that psychology which wrongly proclaims its results as a kind of philosophy."

If psychology is to be regarded merely as an empirical examination of the facts of consciousness as they are had by abstraction from the real unity of life, then Professor Münsterberg has undoubtedly done a service by confining it to its proper sphere. From his standpoint, which is also that of most psychologists of the present time, he has done well to call attention so forcibly to the usurpation of other fields on the part of psychology. The tendency at present seems to be to accept the results of psychological investigations as full explanation of the activities of life, and this is certainly assuming more than they are entitled to.

But in his endeavor to take psychology out of this wider field the author has so isolated it as to leave it of little or no value to philosophy. It is merely a science of transformed experience "for special logical purposes in the service of our life." As such it is of no value to philosophy. Philosophy cannot any longer remain indifferent to the results of psychological investigation, although it is permitted and required to examine the validity of these results. It is true Professor Münsterberg has not assumed that philosophy and psychology can be divorced, but it is difficult to see how, from his position, they can be brought together.

His chapter entitled "Psychology and Education" is of special interest to the readers of this periodical. His criticism of the mass of material that is paraded under the name of psychological experiments, in which evidence of irresponsible and incapable persons is made to serve scientific investigation, is indeed timely. Psychology has been so much abused in this connection that it is little wonder Professor Münsterberg has made an effort to rescue it from utter collapse as a science. But in doing so he has overstepped the mark and given psychology wholly up to mechanism, in which position it is useless for any practical purposes in education.

If psychology is to be handed over to mechanism, and this seems to be its present condition to a very large extent, no fault can be found with the conclusions of this work. But if we are to consider psychical phenomena as organic rather than mechanical, the position taken here is not quite tenable, and the criticisms lose much of their force. Neither science or psychology is any longer engaged in the study of lifeless abstractions, but living organisms. Such a conception of psychology will place it above some of the restrictive criticisms of this volume.

The main point at issue in this chapter seems to be whether the study of child nature shall come under the head of psychology, not whether the former shall be studied at all. Professor Münsterberg distinguishes sharply between child psychology and the study of child nature, recognizing fully the necessity of the latter, in which the child is to be regarded as an "indissoluble unity." He rightly says this should be done by trained experts through direct examination of the child's life.

If the essay succeeds in showing the need of more complete knowledge of child nature as it is to be seen in its normal activities, it will have served a purpose no matter what term we choose to apply to such study.

A. S. HURST.

School Hygiene. By LUDWIG KOTELMANN. Translated by John A. Bergstrom, Associate Professor of Psychology and Pedagogy, and Edward Conradi, Graduate Student Indiana University. Syracuse, N. Y., C. W. Bardeen, publisher, 1899. pp. 391.

The excellence of the German edition of this hand-book of school hygiene has already been noticed in the *Ped. Sem.* The English translation by Dr. Bergstrom has been made from an improved edition specially prepared by the author for this purpose, and hence it comes to pass that the translation forms a more valuable work than the original; for much new and important material has been added. The translator has done his work with the care and accuracy characteristic of the thorough student, and has added an interesting introduction and a valuable bibliography. With such a work accessible in English there is no longer any excuse for teachers if they remain ignorant of the fundamental teachings of school hygiene. That the publisher has not done his part as well as the author and translator should not deter students from buying so valuable a book. W. H. B.

BOOK NOTES.

G. S. H.

Die Entwicklung vom Sprechen und Denken beim Kinde. Von WILHELM AMENT. Leipzig, E. Wunderlich, 1899. pp. 213.

This is a work of great value and thoroughness, abounding in tables and charts representing the development of the first two hundred ideas of a child. The author has read widely the literature of child study, and even gives a twenty-page history of it, including the American movement. Baldwin's "Mental Development in the Child and the Race" is criticised as abortive, a "*nicht geglückter Versuch.*" The development of the sentence, its form, meaning and stylistic qualities, is the most interesting and suggestive part of what we must recognize as one of the most careful and labored efforts of the modern child study movement. The author worked under the influence of his teachers, Professor Külpe and Docent Marbe, and his work was partially controlled by Professors Brenner and Jolly. The observations were made with unusual care and method on several children.

Notes on the Development of a Child. Parts III and IV. By MILICENT W. SHINN. University of California Studies, Vol. I, Nos. 3 and 4. Berkeley, 1899. pp. 179-424.

This is number 3 and 4 of the author's Notes on the Development of a Child, 1 and 2 of which were published some years ago. The printing of this is made possible by the liberality of Mrs. Phœbe Hearst. An interesting article on "Children's Drawings," by Elmer E. Brown, is appended. The topics here treated are—sensations of muscular activity, motion and position, organic sensations, spontaneous reflex and instinctive movements, use of the right and left hand, equilibrium and locomotion, instincts connected with food taking, and common reflexes.

Transactions of the Illinois Society for Child Study. Vol. IV, Nos. 1-2, The University of Chicago Press, Chicago, Ill., April-July, 1899.

We are glad to see that Professor Colin A. Scott has resumed the

publication of this valuable quarterly; with its strong advisory board and its high standard its success ought to be assured. The best articles in this number are by W. S. Monroe: Play Interests of Children, G. E. Dawson: Suggestions as to the Basis of a Sunday-School Curriculum, and F. Hall: Comparisons of the Imaginative Powers of Blind, Deaf and Normal Children.

Addresses and Papers. Proceedings of the New Jersey Association for the Study of Children and Youth. Spring meeting, 1899. The Brotherhood Press, Bloomfield, N. J., 1899. pp. 68.

This attractive pamphlet, consisting of eleven articles and reports, marks the origin of one of the best organized and equipped State associations for the study of children and youth. In the list of members are included most of the prominent names in the State. Special credit is due Dr. James A. Green, Principal of the State Normal School, Trenton, and Miss Lillie A. Williams, Professor of Psychology in the same institution. The pamphlet is not only a valuable addition to the literature of the subject, but a good *vade mecum* for those interested in organizing such institutions.

Child Study Record. By THEO. B. NOSS. California, Pa., 1899. pp. 26.

The principal of the Southwestern State Normal School in Pennsylvania has here given an invaluable and very cheap little volume summarizing the results as well as the methods and aims of child study in a very condensed and admirable style, and giving blanks for recording well selected points in the early stages of child development.

The Paidologist. Nov., 1899, Vol. I, No. 3. Cheltenham, England.

The Paidologist has excellent articles on Exceptional Children, Hearing as a Factor in the Education of a Child, a very interesting article on Children's Autobiographies, by Sara E. Wiltse, Girl's Games in London, and a somewhat scathing review of Münsterberg's treatment of child study by Professor Langdon Down.

Psychogene Störungen der Schulkinder. Von ALFRED SPITZNER. E. Ungleich, Leipzig, 1899. pp. 45.

This is an interesting chapter in pedagogic pathology describing various abnormalities of psychic and nervous development in children, with certain suggestions as to the most effective mode of removing them.

Education of the Pueblo Child. A Study in Arrested Development. By FRANK C. SPENCER. Columbia University Contributions, Vol. VII, No. 1. New York, The Macmillan Co., 1899. pp. 97.

This thesis describes the geography, history, social, industrial, institutional, religious and educational life of the Pueblo Indians, to show that they have degenerated below their former state, and to-day represent the characteristic features of arrest. It is a careful and interesting study based on wide acquaintance with literature and on careful study of the Pueblos on the spot.

Child Life in Colonial Days. By ALICE MORSE EARLE. The Macmillan Co., New York, 1899. pp. 418.

In this charming book Miss Earle has summarized her very wide and careful reading upon this subject, and gives over one hundred illustrations of it. When we reflect how little is generally told of child life in history, and how indirect and non-literary many of these sources are, it is surprising to see what very interesting chapters are written

on the details of babyhood, children's dress, school life, school books, discipline, manners, religious training, needlecraft, games, toys, flower lore, precocity, diaries, etc.

Some Defects of the Kindergarten in America. By G. STANLEY HALL. The Forum, Jan., 1900, Vol. XXVIII, pp. 579-591.

The writer of these notes attempts in this article to state the kindergarten doctrine which he believes Froebel would himself approve were he to return to-day. It is largely critical of the metaphysical tendencies of kindergarten education and advocates some attention to evolution in a field where it is now almost absolutely unknown or despised, but where it has more practical application than anywhere else, and also to the rudiments of science.

The Spoilt Child: A Tale of Hindu Domestic Life. By PEARY C. MITTER. Translated by G. D. Oswell. Thacker, Spink and Co., Calcutta, 1893. pp. 234.

This is a very unique educational novel describing Matilall, an eldest son, through a long series of characteristic experiences illustrating how not to do it. He is a very bad child, who bit his teachers, was arrested by the police, and was made bad by faulty education, but finally reforms. It is a very interesting picture of Hindu life.

Stalky and Co. By RUDYARD KIPLING. Doubleday and McClure Co., New York, 1899. pp. 310.

This is a story of boy life, hard to characterize in brief space, but in which evidently personal reminiscence plays an important part, and which is sure to take a high rank among the books of its kind. It would be hard to find since "Tom Brown at Rugby" another book which leaves one so strongly convinced that the studies and recitations in a school make up only a small part of its sum total of educational influence, but it is brutal.

True Motherhood. By JAMES C. FERNALD. Funk and Wagnalls Co., New York and London, 1900. pp. 112.

This is a somewhat light but very plain and concise group of eleven brief chapters on the preciousness of home, its light, training for maternity, the blessing of the promise, the mother's care, presence, love, and a world of homes. All girls should be educated to motherhood, for that only is liberal as distinct from professional training for them.

Through Boyhood to Manhood. By ENNIS RICHMOND. Longmans, Green and Co., London, New York and Bombay, 1899. pp. 194.

This is an interesting work written in a more or less conversational way, and is mainly a plea for three ideals—unselfishness, self-control and purity.

Sittliche Erziehung. Von J. KOOISTRA. E. Wunderlich, Leipzig, 1899. pp. 100.

This writer considers affectionateness, repose, justice, joy, uniformity of mood and firmness to be the chief qualities of the teacher that are concerned in moral education. The relations between school and house are next considered, the virtue of work and order, poetry in child life, the culture of song, gratitude, the way to treat moods, irascibility, the stork question and St. Nicholas, the theater, competitive methods, the many uses of suggestion by the teacher, secrets, ser-

vants, threats, rewards, the many different kinds of punishment, honor, the education of girls:—these are the chief topics in an admirable and very condensed pamphlet which ought to be translated into English at once, where it would fill an unique place.

Heidi: A Story for Children and Those That Love Children. By FRAU JOHANNA SPYRI. Translated by Helen B. Dole. Ginn and Co., Boston, 1899. pp. 363.

This novel is divided into two parts. The first describes Heidi's years of learning and travel, and the second part describes the use she makes of what she has learned. The characters and situation are typical, and the work has the high merit of really interesting both children and adults.

Tales Told Out of School. By EDWARD S. ELLIS. C. W. Bardeen, Syracuse, N. Y., 1899. pp. 240.

Ninety per cent. of these twelve tales, the author says, are true. Each chapter characterizes Dick, Jack, Bill, Tommy, Joe, and Sam respectively, with characteristic incidents. Such material cannot fail to be of interest because it is of children, but they are the more so because the tales are well told.

Ueber Frauenbildung. Von DR. SCHULTZE. Ueber Frauenarbeit, von Dr. Stöcker, Berlin, 1899. pp. 63.

This is a somewhat progressive discussion of woman's education. The court preacher, Stöcker, who became widely known from his anti-Semitic, polemic views some years ago, has here gathered comprehensive figures to show that women, especially in the middle classes, are more and more commonly taking up men's work. Very interesting and diverse are the opinions of various German women concerning the woman movement, which are printed as an appendix at the end.

The Psychology of Woman. By LAURA MARHOLM. Translated by Georgia A. Etchison. Grant Richards, London, 1899. pp. 295.

This is the first treatise on this subject by a woman, and this, of itself, makes it a contribution of interest if not of value. Catholic and Protestant women are considered. Of special interest are the chapters on three generations of women, the attempts for happiness, the history of women's illnesses, anxiety, seekers, the man question. The author contemplates another work devoted solely to sexual psychology.

Kalogynomia or the Laws of Female Beauty; Being the Elementary Principles of that Science. By T. BELL. The Walpole Press, London, 1899. pp. 331.

This work is published in a limited edition of one thousand copies only, and describes the characteristics of female beauty in various lands, the origin, influences, periods, and economy of love and sexual activity, and in the last chapter discusses monogomy, polygamy, prostitution, etc. It is anything but a scientific book, and deals with vague generalities and common places. It is difficult to see the utility or justification of this treatise.

A Student's History of the United States, by EDWARD CHANNING. The Macmillan Co., New York, 1899. pp. 615.

This text-book with plenty of maps and illustrations begins with the Icelandic discovery in the year 1,000 and ends with the close of the late Spanish War. The author is professor of history in Harvard.

The New Humanism. Studies in Personal and Social Development, by EDWARD H. GRIGGS. New York, 1900. pp. 239.

These ten lectures are on the higher human life, the evolution of personality, the dynamic character of personal ideals, the content of the ideal of life, positive and negative, Greek and Christian, womanly and social, ideals, the ethics of social reconstruction, the religion of humanity. The author of these lectures, published by himself in an attractive volume, is full of the best blood of idealism and might almost be called ideal intoxicated. He seems a pure soul smitten with the love of the beautiful, the good, the true, who lives in the masterpieces of Greek tragedy, Dante, Goethe, Arnold, and all the rest, and to be a fervid and eloquent preacher of the ideal in art, literature and society, but with little knowledge of or interest in science and with greater power of appreciation than of criticism.

Desiderius Erasmus of Rotterdam, by EPHRAIM EMERTON. G. P. Putnam's Sons, New York and London, 1899. pp. 469.

This is a thorough going and long desired life of one of the great educators of the world by the Harvard professor of ecclesiastical history. In some respects as in showing his many deceits, Erasmus is disenchanted by this story, but his true greatness is sufficient to triumph even over this exasperating fault and to incline us to leniently take account of the age in which he lived.

Port-Royal Education: A Sketch of its History with Extracts from its Leading Authors, by FÉLIX CADET. C. W. Bardeen, Syracuse, N. Y., 1899. pp. 406.

The one hundred and nine pages of history of the Port-Royal schools give a charming idea of their personnel, theories and methods. The extracts from seventeen of the leading writers are on the whole well chosen and in order to illustrate the main points made by the history.

History of Education, by LEVI SEELEY. American Book Co., New York, Cincinnati, Chicago, 1899. pp. 343.

This is the briefest, most concise, and comprehensive of all the histories of education, and hence it has its place. As a kind of primer of the subject, it begins with China, India, Persia, and the Jews, and ends with Horace Mann, and the systems of Germany, France, England, and the United States.

An Outline of the History of Educational Theories in England by H. T. MARK. C. W. Bardeen, Syracuse, N. Y., 1899. pp. 139.

This interesting history is written from a broad point of view and begins with educational movements in England in the Middle Ages. The tendencies and personages of the renaissance in England constitute a second chapter; the theories of physical education a third; the unfoldment of ideals of intellectual, practical and moral education fourth, fifth and sixth chapters. It is not only thoroughly sensible, but is also learned and readable as so few educational books are.

Method in Education, by RURIC N. ROARK. American Book Co., New York, Cincinnati, Chicago, 1899. pp. 348.

Professor Roark, known also for his "Psychology in Education" on which this is founded, here gives us with much detail what he deems the proper method of teaching, reading, spelling, object lessons, geography, history, civics, physiology, number, grammar, language, and character. For all who like to paraphrase Mark Hopkins, for all

who like this kind of a book, it is just the book those people will like. I know of nothing better, however, at present in this dreary field; but what a book might now be written here.

Theory and Practice of Teaching, or the Motives and Methods of Good School Keeping, by DAVID P. PAGE. Edited by E. C. Branson. American Book Co., New York, Cincinnati, Chicago, 1899. pp. 382.

This well known standard book more than half a century old is edited anew with many minor changes, and strange to say the editor has taken the liberty of introducing an entire chapter of his own as if it were Page's. The leading topics are the teacher's spirit, fitness, responsibility, habits, literary attainments, methods, government, arrangement, rewards.

Reading: How to Teach It, by SARAH LOUISE ARNOLD. Silver, Burdett & Co., Boston, New York, Chicago, 1899. pp. 288.

This book has a tasteful exterior but no index whatever. The writer asks why we read, tells how to teach this art, how to study and prepare, gives several plans of work with illustrations and directions on the use of the library. Nearly forty pages of books that have been tested and found helpful in the school-room are appended.

Lucifer: A Theological Tragedy, by GEORGE SANTAYANA. Herbert S. Stone & Co., Chicago and New York, 1899. pp. 187.

Professors Santayana of the Harvard philosophical department here attempts the most ambitious and heaven storming tragedy in history. Its characters are the risen Christ, the archangel Michael, St. Peter, Lucifer, Mephisto, Azazel, Belial, Zuse, Hermes, Ares, Athena, Aphrodite, together with saints, devils, witches, goddesses, etc. In the general mix up of heaven and hell, Semitic and Aryan characters, it is pleasing to see that the characters preserve their equilibrium, talk far more dignified language than do the characters in "The Boat-House on the Styx," and in the end most of the others are greatly impressed with Christ.

Friends and Helpers. By SARAH J. EDDY. Ginn and Co., Boston, 1899. pp. 231.

The object of this book is to teach children to treat all living creatures kindly. It consists mostly of animal stories gathered from quite a wide range of literature, interspersed with still more from sources not given. The pictures are mostly extremely life-like, but the selections might be greatly improved upon. The book seems to be a tendence work, the object of which is anti-cruelty and the formation of bands of mercy.

Ways of Wood Folk. By WILLIAM J. LONG. Ginn and Co., Boston, 1899. pp. 205.

The author is a lover of animal life, and infects his readers with his own zest and interests them in his own experience. Fifteen animals and birds are treated in as many chapters in a breezy, natural out-of-door way.

Wild Animals in Captivity. By A. D. BARTLETT. Chapman and Hall, Ltd., London, 1899. pp. 373.

The author was for many years curator of the Zoölogical Garden in Regent's Park, London, and had a rare acquaintance with the animals

it contained. He was not a scientific man, but originally a taxidermist, but his book abounds in new and striking observations and in interesting incidents.

Initial Study in American Letters. By HENRY A. BEERS. The Chautauqua Press, New York, Cleveland and Chicago, 1899. pp. 221.

These are careful and discriminating essays on (1) the colonial, (2) the revolutionary period, (3) the era of national expansion, (4) the Concord writers, (5) the Cambridge scholars, (6) literature in the sixties, and (7) literature since 1861.

Primitive Love and Love-Stories. By HENRY T. FINCK. Charles Scribner's Sons, New York, 1899. pp. 851.

Mr. Finck's work on Romantic Love and Personal Beauty, Wagner, Chopin, and various travels, here gathers from many sources sentiments and theories on jealousy, coyness, adoration, personal beauty, specimens of love among the native African, Australian, Pacific Islanders, Indians, and other wild tribes, and attempts to co-ordinate all this rich and varied but very imperfectly organized material under the general principle of evolution. The subject itself, however, is sufficient to assure great interest.

L'Instinct Sexuel Évolution et Dissolution. Par CH. FÉRÉ. F. Alcan, Paris, 1899. pp. 346.

This study of evolution and dissolution is broader than most books upon the subject, although it is mostly devoted to abnormal manifestations. The best chapters are those devoted to sexual education and hygiene and on the responsibility of this instinct. Morbidities of parental also of animal love are discussed.

Die Erkrankungen der Sprechstimme, ihre Ursachen und Behandlung nebst einer kurzen Hygieine für Lehrer, Geistliche, Advokaten und Offiziere, von R. KAFEMANN. A. W. Kafemann, Danzig, 1899. pp. 48.

This is a very convenient primer of the more important points that bear upon the hygiene of the speaking voice and is designed at the same time for teachers, clergymen and other public speakers. It is by an expert laryngologist.

Schulgesang und Erziehung, von HEINRICH SCHÖNE. E. Wunderlich, Leipzig, 1899. pp. 63.

Herr Schöne here addresses teachers, parents and musicians with a plea for greater interest in musical education for its moral and other educational influences. Singing, he thinks, is its best form and describes the effect of such an ideal as his upon political and religious life.

The Child Voice in Singing, by F. E. HOWARD. Novello, Ewer & Co., New York, 1898. pp. 138.

This is a convenint digest of voice physiology, registers, compass, etc., with plenty of directions as to how to secure a good tone and to articulate. Interesting chapters also are included on mutation and the alto voice in male choirs.

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